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SOAP

NOVEMBER 1936

PRODUCTS
-from select sources

RESINAROMES
ESSENTIAL OILS
AROMATIC CHEMICALS

Our sources of supply, world-wide in extent, provide us with the materials you use • Consider also, Ungerer's chemists, skilled in all formulae preparation and analysis. • The combination spells superb service—Ungerer service.

UNGERER & CO.
13-15 West 20th St. New York

SOAPS
INSECTICIDES
DISINFECTANTS
CHEMICAL SPECIALTIES
SANITARY SUPPLIES
POLISHES
CLEANERS

Our Furniture Cream and Wax Cream give furniture finishes that last long—and longer! Both profit and polish they make in "high."

Fuld "Thirty-Sixers" Can Afford To "Treat"

He treats Big Chief Floor-Trouble, Chief Odor-Causer, Little Germ Spreader, Bug Breeder and all that tribe–and they like it. No wonder. He has a perfect treatment for each–under HIS OWN LABEL. And when they come back for more, they'll come straight to him.

WHAT FULD MAKES for the LEADERS

LIQUID CLEANERS
- Pine Scrub Soap
- Liquid Scrubbing Compound
- Sassafras Scrub Soap
- Floor Bleach
- Rug Shampoo

INSECTICIDES
- Roach Powders
- Fly Sprays
- Cattle Sprays
- Pyrethrum Sprays
- Moth Spray
- Rat Exterminators
- Sprays for Special Purpose Concentrates

FLOOR WAXES and SEALS
- Self-Polishing Wax
- Liquid Wax
- Wood Seal
- Gym Seal
- Terrazzo Seal
- Wax-Var
- Paste Wax
- Dance Floor Wax

CONTAINERS
- Urinal Strainers
- Wall Containers
- Soap Dispensers

CLEANING COMPOUNDS
- Washing Compounds
- Window Cleaner
- Scouring Compounds
- Fabric Cleaners
- Weed Killers
- Waterless Cleaner
- Beer Coil Cleaner
- Paint & Varnish Remover
- Sterilizing Agents
- Tile Bleach

LIQUID DEODORANTS
- Chlorozif
- Forma Chloro Sprays
- Theatre Sprays
- Pine Deodorant
- Drip Machine Fluid

LIQUID and BASE SOAPS
- Liquid Hand Soaps (All percentages 10 to 40%)
- Shampoos
- Cocoanut Oil Base Soaps

OIL and SOFT SOAP
- All Percentage Oil Soaps
- Jelly Soaps

DISINFECTANTS
- Pine Oil
- Coal Tar (All Co-Efficients)
- Cresol Compounds
- Chlorine
- Powdered Chlorine

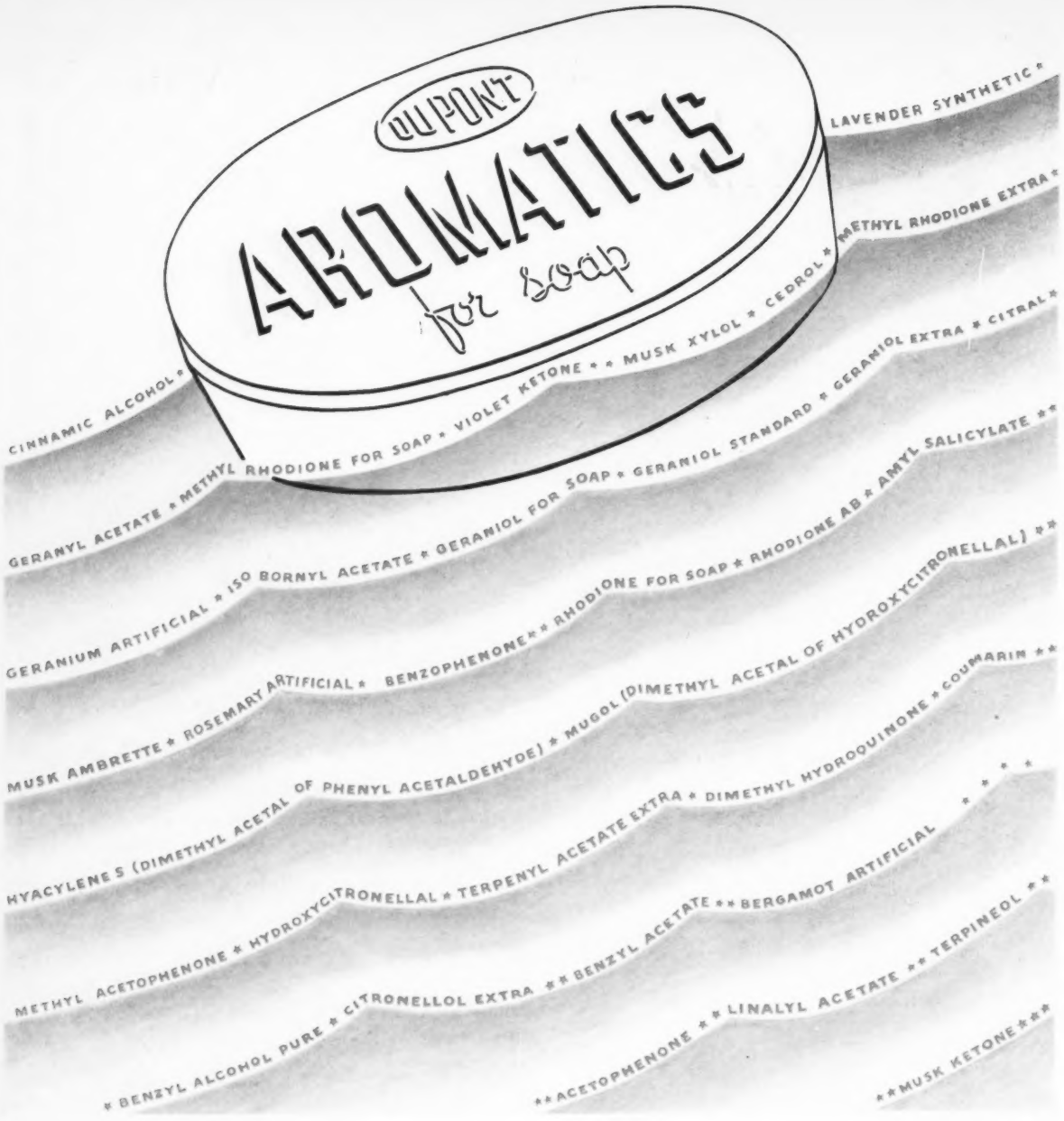
POLISHES
- Count 1234567
- Metal Polishes (Liquid, Paste & Powdered)
- Auto Polish
- Furniture Cream
- Furniture Polish
- Floor Oil
- Silver Pastes and Creams

PLUMBING SPECIALTIES
- Drain Pipe Cleaners
- Liquid & Powdered Bowl Cleaners
- Tile & Enamel Cleaners
- Boiler Compounds

DEODORANT BLOCKS and CRYSTALS
- Urinal Blocks
- Deodorant Blocks 2 to 40 oz. sizes
- Deodorant Crystals

FULD BROS.
BALTIMORE. MARYLAND

COUMARIN
CHEMICALS OF QUALITY
Monsanto
ST. LOUIS, U.S.A.
• METHYL SALICYLATE U. S. P.
(OIL OF WINTERGREEN SYNTHETIC)
• TRI SODIUM PHOSPHATE
• NITRE CAKE
• CRESYLIC ACID
• SANTOCHLOR
(PARADICHLORBENZENE)
• ORTHODICHLORBENZENE
» USE these Monsanto products with confidence. They have proven their ability to produce consistently superior and economical results. We recommend their applicability in your formulae.
Monsanto Chemical Company
ST. LOUIS, U.S.A.
NEW YORK • CHICAGO • BOSTON
CLEVELAND • BIRMINGHAM • CHARLOTTE
SAN FRANCISCO • MONTREAL


DU PONT
AROMATICS
for soap
CINNAMIC ALCOHOL *
GERANYL ACETATE * METHYL RHODIONE FOR SOAP * VIOLET KETONE * * MUSK XYLOL * CEDROL *
GERANIUM ARTIFICIAL * 150 BORNYL ACETATE * GERANIOL FOR SOAP * GERANIOL STANDARD * GERANIOL EXTRA * CITRAL *
MUSK AMBRETTE * ROSEMARY ARTIFICIAL * BENZOPHENONE * * RHODIONE FOR SOAP * RHODIONE AB * AMYL SALICYLATE * *
HYACYLENE S (DIMETHYL ACETAL OF PHENYL ACETALDEHYDE) * MUGOL (DIMETHYL ACETAL OF HYDROXYCITRONELLAL) * *
METHYL ACETOPHENONE * HYDROXYCITRONELLAL * TERPENYL ACETATE EXTRA * DIMETHYL HYDROQUINONE * COUMARIN * *
* BENZYL ALCOHOL PURE * CITRONELLOL EXTRA * * BENZYL ACETATE * * BERGAMOT ARTIFICIAL * * * *
* * ACETOPHENONE * * LINALYL ACETATE * * TERPINEOL * *
* * MUSK KETONE * * *
LAVENDER SYNTHETIC *
METHYL RHODIONE EXTRA *

● To insure quality in a finished product, it is essential to use the finest ingredients obtainable and to maintain effective control throughout its production. When you use du Pont Aromatics, you are assured of the uniformity and high quality which permit proper control in the manufacture of fine soaps.

DU PONT
REG. U. S. PAT. OFF.

E. I. DU PONT DE NEMOURS & CO., INC., FINE CHEMICALS DIVISION
WILMINGTON, DELAWARE

SOAP

Volume XII
Number 11

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November, 1936

MEMBER AUDIT BUREAU OF CIRCULATIONS

SANITARY Products Section, which is included as a department of every issue of SOAP, begins on page 79. Production Section begins on page 65.

Published monthly by

MAC NAIR-DORLAND COMPANY, INC.
254 WEST 31st STREET NEW YORK, N. Y.

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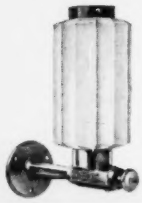
Elected!

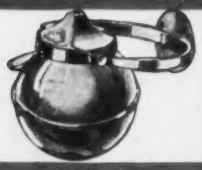
DUODEK



SOPURNIA

TRICONIC

HOOK SHAPED



ALL METAL TILTYPE

MICHROME PUSH BUTTON VALVE

The MODERNE seems to be the unanimous choice of liquid soap manufacturers and dealers who are on the alert for BETTER VALUE. The MODERNE combines dependability and sturdiness in addition to its delightfully modern design. Now you can get a machine that is low in price and beautiful at the same time. Literature on the complete line is yours for the asking.

CLIFTON CHEMICAL CO., INC.

246 FRONT STREET NEW YORK, N. Y.

-----TEAR OFF HERE-----

CLIFTON CHEMICAL CO., 246 Front St., New York City.

WANT DETAILS ON THESE?

- ☐ CONCENTRATED LIQUID SOAP
- ☐ COCONUT OIL BASE
- ☐ OLIVE OIL BASE
- ☐ DISPENSERS
- ☐ RUB-NO WAX
- ☐ DEODORIZING CAKES
- ☐ DEODORIING BLOCKS
- ☐ WALL CONTAINERS
- ☐ METAL POLISH
- ☐ MOPPING VARNISH
- ☐ DISINFECTANTS
- ☐ FURNITURE CREAM
- ☐ INSECT KILLER
- ☐ SPOT REMOVER
- ☐ SHAMPOOS

NAME .....

ADDRESS .....

AQUAROMES

WATER SOLUBLE PERFUME OILS

Actual photographs of Felton Aquarome in water solution in comparison with ordinary water soluble perfume oil.

WATER soluble perfume oils are consistently increasing in importance in the manufacture of Shampoos, Liquid Soaps, Theater Sprays, Deodorant Sprays, Formaldehyde preparations and many others.

The development of FELTON AQUAROMES is a major factor in this Field, enabling the perfuming of all these types of products without difficulty. Completely soluble in water to an absolutely clear solution, Aquaromes leave no trace of oil film or cloudiness.

AVAILABLE IN A LARGE SELECTION OF POPULAR ODORS . . . AND PRICED FOR ECONOMY!

*AQUAROMES—Reg. U. S. Pat. Off.

WRITE FOR SAMPLES TODAY!

FELTON CHEMICAL COMPANY

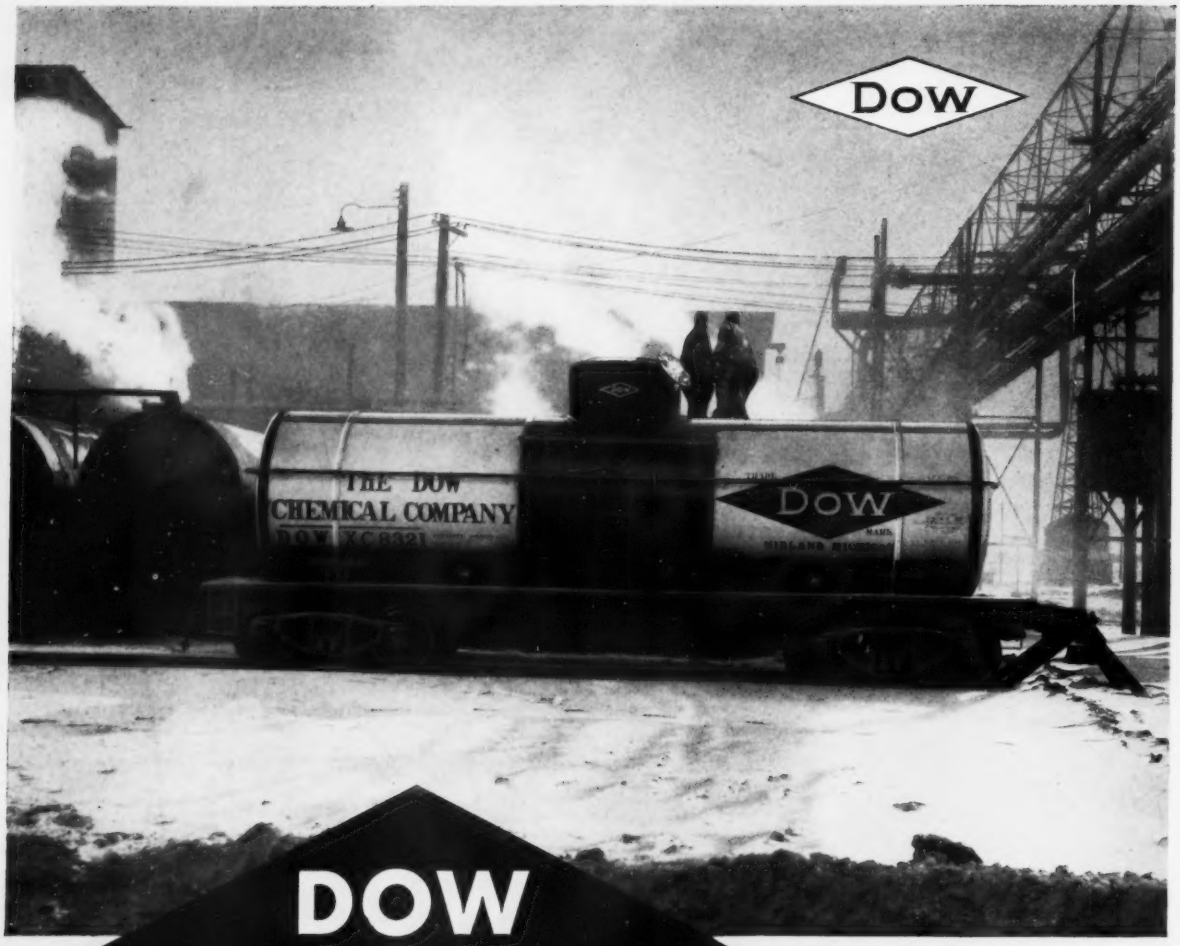
INCORPORATED

603 JOHNSON AVENUE, BROOKLYN, N. Y.

Manufacturers of AROMATIC CHEMICALS, NATURAL ISOLATES, PERFUME OILS, ARTIFICIAL FLOWER AND FLAVOR OILS

Executive Offices and Factory: 603 JOHNSON AVE., BROOKLYN, N. Y.

Boston, Mass. 89 Boylston St. | Philadelphia, Pa. 200 So. 12th St. | Sandusky, Ohio 1408 W. Market St. | Chicago, Ill. 1300 Ashland Ave. | St. Louis, Mo. 245 Union Blvd. | New Orleans, La. Balter Bldg. | San Francisco, Calif. 512 Washington St. | Los Angeles, Calif. 515 So. Fairfax Ave.



DOW CAUSTIC SODA

FLAKE · SOLID LIQUID

Dow Caustic Soda, like all Dow Products, is a quality product—uniform, dependable and benefiting from the research that is constantly carried on by Dow.

Moreover, Dow production facilities are of such size and scope that all customer demands can be readily met.

It is the combination of these two factors that has earned Dow the privilege of being the source of supply for many of the country's largest users of this product. Write for full details.

PARTIAL LIST OF DOW INDUSTRIAL CHEMICALS

Aniline Oil • • Calcium Chloride, Flake 77-80%, Solid 73-75% • • Carbon Bisulphide 99.99% • • Carbon Tetrachloride 99.9% • • Caustic Soda, Flake and Solid • • Chloroform • • Epsom Salt, Technical • • Ethyl Bromide • • Ethyl Chloride • • Ferric Chloride • • Magnesium Chloride • • Monochlorbenzene • • Monochloracetic Acid • • Phenol • • Sodium Sulphide • • Sulphur Chloride.

A view in the Dow Caustic Soda Finishing Plant

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

Branch Sales Offices: 30 Rockefeller Plaza, New York City—Second and Madison Streets, Saint Louis

P.Q. SILICATE SERVICE ...animated

A P.Q. CUSTOMER recently wrote: "We appreciate very much the wonderful service you have given us in our time of trouble."

Rush orders call for a rush schedule, and everything humanly possible is done to accommodate your emergencies. But the P.Q. sentinels stay on guard to check quality, to inspect and clean the tanks. P.Q. is never so busy that these essentials are glossed over, for they are vital to uninterrupted production in your plant.

Both in products and service, you can depend on the P.Q. friendly, helpful spirit.

Established 1831

PHILADELPHIA QUARTZ CO.

General Offices and Laboratory: 125 S. Third St., Philadelphia, Pa. Chicago Sales Office: Engineering Bldg. Sold in Canada by National Silicates, Ltd., Toronto.

P.Q. WORKS
ANDERSON, IND.
BALTIMORE, MD.
CHESTER, PA.
GARDENVILLE, N.Y.
KANSAS CITY, KANS.
RAHWAY, N.J.
ST. LOUIS, MO.
UTICA, ILL.

SILICATES of SODA

Each of these people helps you get **BETTER VALUE** *in Anchor Closures*

EVERY COMPONENT part of the entire Anchor organization dovetails together to provide you with the most dependable, uniform and efficient closures made for glass-packed products. Not a cap goes out of our plant that does not embody in it some point of superiority — a result of the combined effort of these people.

MANAGEMENT is responsible for having provided the most complete line of caps on the market, for authorizing extensive research, for building up a manufacturing, sales and service organization second to none in the industry.

THE FACTORY, in producing quality products worthy of the Anchor reputation through rigid specification of raw materials, the exercise of almost unbelievable care in inspection and the control of accuracy in all manufacturing operations, contributes to the uniformity and dependability of Anchor Caps.

OFFICE STAFFS both in the factory and in the branch offices see that the wheels go round smoothly and economically, that orders are received, handled and filled with all possible dispatch.

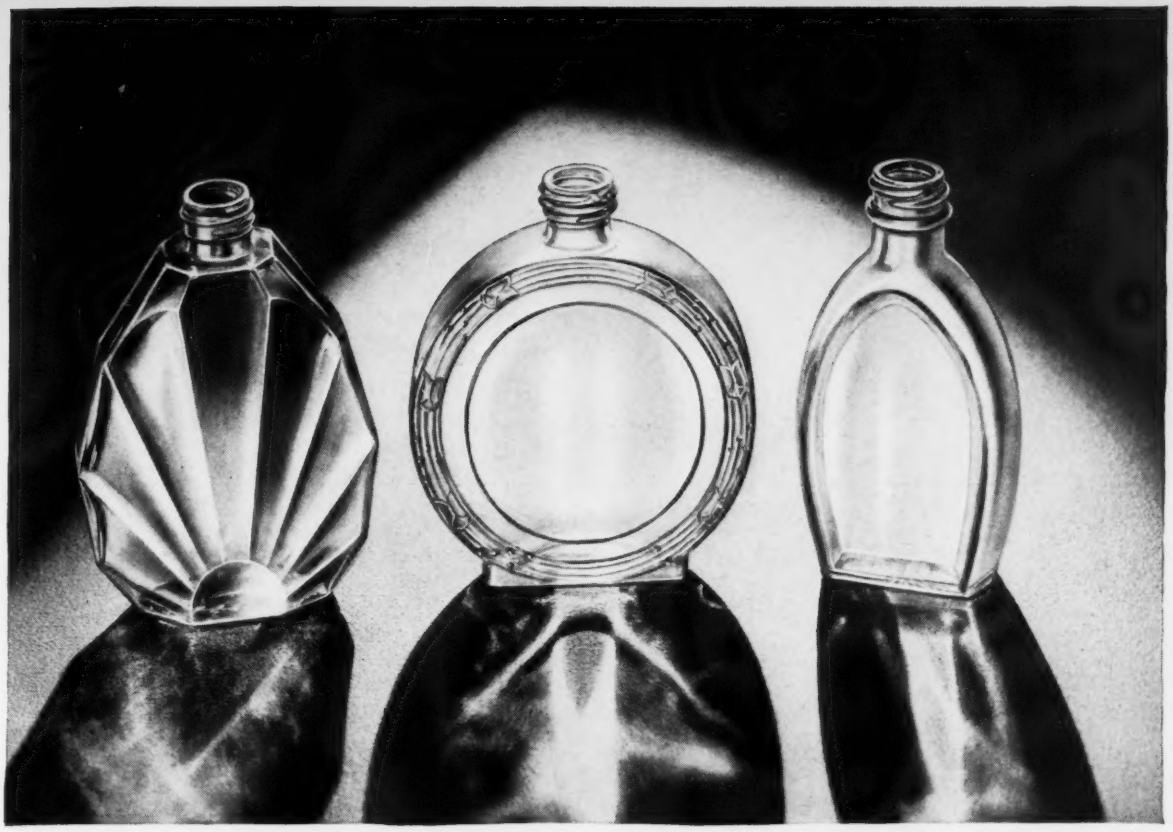
OUR SALES REPRESENTATIVES know the subject of closures thoroughly, are experienced and competent to aid in making suggestions or recommendations on the proper type of closures and proper methods of sealing. They can help you solve your closure problems.

TECHNICIANS in the Anchor laboratories, research and engineering departments are constantly developing new closures to meet specific needs, investigating products and the best methods of sealing them, making improvements in closures, in sealing machines and in production methods.

* * *

Perhaps these few facts will help to explain in part why concerns large and small can safely and confidently rely on Anchor for their closure requirements. ANCHOR CAP & CLOSURE CORPORATION, *Long Island City, New York; Toronto, Canada. Branch offices in all principal cities.*

Caps by ANCHOR



EYES THAT APPRECIATE *Daintiness*

Feminine eyes delight in dainty things. Their eyes light up where beauty is concerned. Here we present three smart Salem bottles, jewel-like in appearance, with the sparkle of diamonds. With appropriately chosen accessories they can be made into beautiful packages, the kind that will bring a gleam of appreciation to feminine eyes.

Of course, Salem makes hundreds of other styles, suitable for all sorts of different drug, cosmetic and specialty products of either a practical or a luxury nature. All are well made, accurate, sturdy containers . . . the kind of glassware for which Salem has been noted for many years. SALEM GLASS WORKS, Salem, New Jersey. *Associated with* CAPSTAN GLASS COMPANY, Connellsville, Pennsylvania. *Branch offices in all principal cities.*

CAPSTAN *Glass*

A Market for
SOAPS
SANITARY PRODUCTS
SANITARY ACCESSORIES

Because SOAP thoroughly covers the entire soap, sanitary products and chemical specialty fields, including janitor supply houses as well as manufacturers, the magazine is a market place for all kinds of bulk and private brand products and sanitary accessories. Whether you sell soap bases, finished bulk or private brand soaps of any kind, disinfectants, insecticides, floor or moth products, mops, brushes, floor machines or, in fact, anything in this line that is handled on a jobbing basis, SOAP is the magazine to use for advertising.

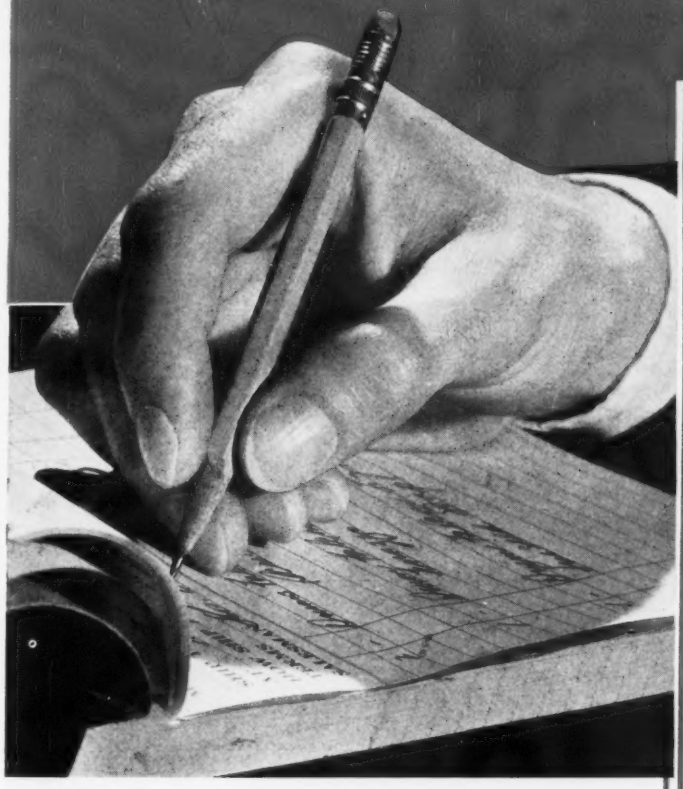
Look on page 134 for a complete list of firms advertising bulk products. Most of these advertisers have been using space for several years. In a good many instances they are now using considerably more advertising than they were at the start. What better recommendation as a result getter could SOAP possibly have? As for sanitary accessories—the same firms buy mops, brushes, floor machines, etc., as buy bulk and private brand products for resale.

If you are in position to handle business of this type why not get full information about what SOAP has done for others in the bulk field? Remember—even manufacturers buy bulk and private brand products because few concerns interested in marketing a complete line have facilities for making everything in their own plants. Add to this the requirements of the regular janitor supply industry and you have something worth making a special effort to get.

Advertising Department, SOAP
254 W. 31st St. New York City

REORDERS COME EASILY

when you sell these SAFE soaps



FALCON ECONOMY SCRUB SOAP

A perfectly balanced, neutral, vegetable oil liquid soap which is very economical in actual use. Cleanses thoroughly and rapidly. Available in two odors—Sassafras or Pine.

FALCON POTASH SCRUB CLEANSER

A safe, concentrated, liquid soap to use on many types of floors. Contains a high soap content which gives it exceptional cleansing power, even when diluted.

FALCON LIQUID TERRAZZO SOAP

This soap is made especially for tile, terrazzo, and marble floors. Removes oil, grease and traffic marks quickly and easily, and leaves an attractive lustre on the floor.

FALCON LIQUID LINSEED OIL SOAP

A neutral, concentrated, liquid, linseed oil soap which bears the approval of the country's leading linoleum manufacturers, for it leaves the linoleum resilient and clean. Widely used as an automobile soap. It preserves the body finish.

FALCON VEGETABLE OIL JELLY SOAP

This is an effective, neutral soap. Made strictly of vegetable oils. Has ample soap content for satisfactory cleansing performance. Contains no excess alkali and is very economical.

HUNDREDS of jobbers find Falcon Floor Cleansers a powerful means of building business.

For each Falcon Cleanser is recommended for a certain type of floor. And the ingredients of each cleanser have been tested and found safe for that particular floor. Thus, when your customer uses a Falcon Cleanser he is guaranteed the most satisfactory cleaning results, without slightest risk to expensive flooring materials.

In addition to safety, Falcon Floor Cleansers assure beauty and economy *at no extra cost*. Naturally reorders come easily. That's why you can always depend on Falcon Floor Cleansers for a steady and profitable business.

EAGLE SOAP CORPORATION

HUNTINGTON **INDIANA**

FALCON FLOOR CLEANSERS

D&O
ESTABLISHED IN 1796

ESSENTIAL OILS
SYNTHETIC AROMATICS
COMPOUNDED PERFUME BASES
For the Soap and Insecticide Industries

SAFROL

OIL SASSAFRAS ARTIFICIAL

OIL CAMPHOR SASSAFRASSY

We offer these products of our own manufacture in cans, drums or carloads.

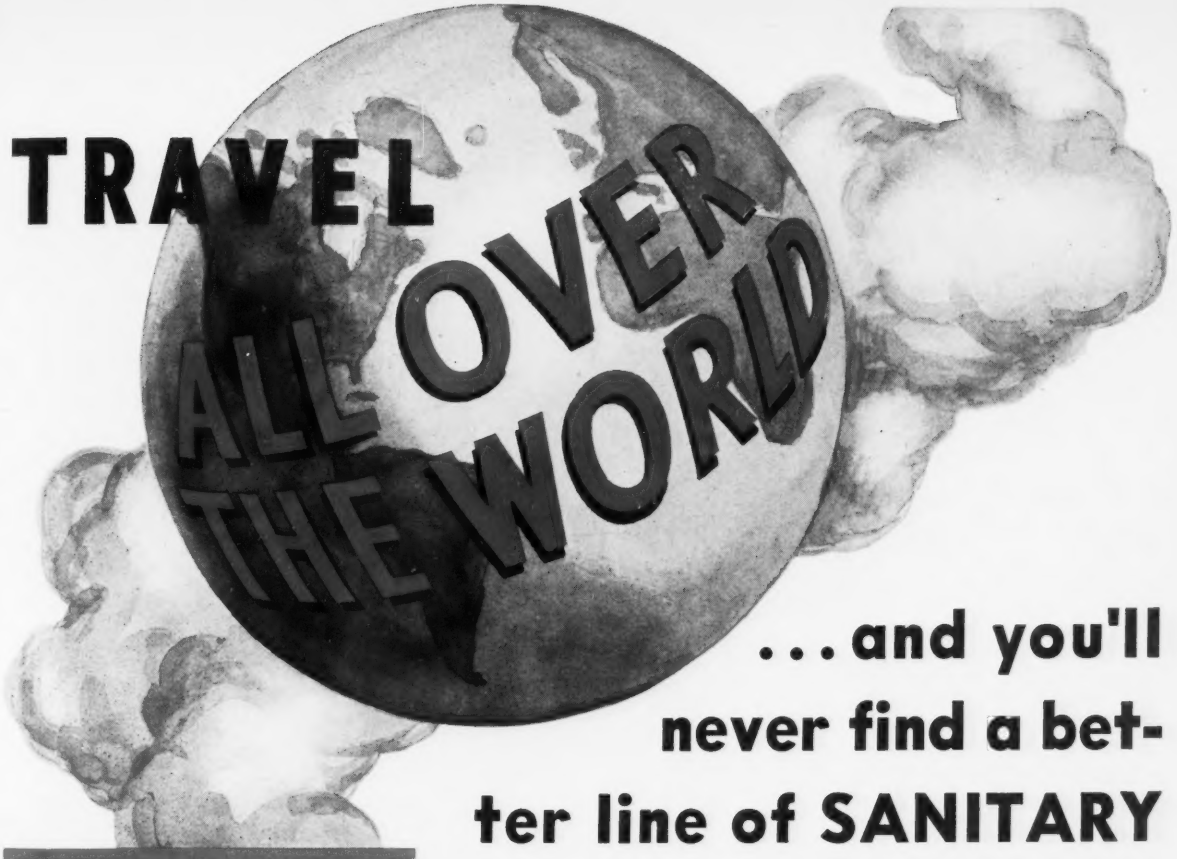
DODGE & OLCOTT COMPANY

180 Varick Street . . . New York

BRANCHES: PHILADELPHIA — BOSTON — CHICAGO — ST. LOUIS — LOS ANGELES

"The integrity of the house is reflected in the quality of its products." — *Copyright* 1930

TRAVEL ALL OVER THE WORLD



...and you'll never find a better line of SANITARY SUPPLIES than is made by Davies-Young

OIL SOAPS • COCONUT BASE SOAPS • LIQUID BASE SOAPS • SCRUBBING SOAPS • WAXES • POLISHES • FLOOR FINISHES • DISINFECTANTS • INSECTICIDES • DEODORANT BLOCKS

All produced under Laboratory Control . . . which assures UNIFORMITY

Sold ONLY through Jobbers

THE DAVIES-YOUNG SOAP CO.
Dayton, Ohio

Copyright, 1936, By The Davies-Young Soap Co.

A Complete Publ
for the SOAP *and* SANITARY

"SOAP"

Soap is the only publication devoted exclusively to the soap, sanitary product and chemical specialty industries—to the interests of those who manufacture soaps of all kinds, household insecticides, disinfectants, polishes, cleaners, floor specialties and related products and to the closely allied service groups, sanitary supply houses and exterminators. It is the one trade journal giving these industries a complete business paper service which includes special business and manufacturing articles dealing with a wide variety of subjects, a complete news and raw material market service, a record of all pertinent patents and trade marks, information on new products and packages, etc. Because the editorial section of the paper is confined exclusively to subjects of interest to these manufacturers and service organizations and does not ramble far afield to coax in stray advertising, a subscription is a good investment for any concern in the industry.

Of special interest to all companies selling to the soap and sanitary products industries is the fact that **Soap** is a member of the Audit Bureau of Circulations. Advertisers and prospective advertisers get circulation facts—not unaudited and unsubstantiated publishers' statements.

"SOAP BLUE BOOK"

The **Soap Blue Book** is published annually in January and is mailed, without charge, to all subscribers. It serves the soap and sanitary products industries as a buyers' guide and business and technical reference book. In the buyers' guide section are complete lists of suppliers of practically everything readers of **Soap** buy—raw materials, containers, equipment, bulk and private

blication Service
PRODUCTS INDUSTRIES

brand products, etc. These lists differ from those found in most guides in that advertisers are not listed indiscriminately. Every effort is made to confine listings to "first hands" — manufacturers, direct importers or sole selling agencies. In the reference section we attempt to include material which will be useful throughout the year. The 1936 edition, for example, contained articles on "Development of New Products"; "How to Buy Sanitary Specialties"; and "How to Estimate Pyrethrins"; the Peet-Grady test for liquid insecticides in full and revised form, the F.D.A. test for disinfectants and complete Federal specifications for twenty-six soaps and sanitary specialties. A new feature of this section was an Index to **Soap** for 1933-35

TECHNICAL BOOKS

The publishers of **Soap** act as selling agents for practically every book house issuing books needed by manufacturers of soaps and sanitary specialties. These books, a complete list of which may be found on page 74 in the current issue, cover almost every subject which might be of interest to **Soap** readers. They are sold at publishers' regular list prices.

SUBSCRIBERS' INQUIRIES

While we do not believe that it is the proper function of any business paper to attempt to give out manufacturing advice, formulas, etc., we do find that we can be of service to subscribers in many other ways. Over the year we handle hundreds of inquiries of various kinds. We locate sources of supply for various raw materials, machines, containers, finished products, etc., check up on manufacturers of trade marked articles, locate missing addresses, etc. If a subscriber has a question and and it is not for a formula or for manufacturing advice we can usually answer it.

MAC NAIR-DORLAND CO.
Publishers.

HEAVY CHEMICALS
OF STANDARD PURITY

Sodium Silicate

Clear and Opalescent—Standard Strengths

Also: **NITRE CAKE, SALT CAKE, BARIUM CARBONATE, TRISODIUM PHOSPHATE, SODIUM FLUORIDE, SODIUM SULPHITE, HEAVY ACIDS and INDUSTRIAL CHEMICALS**

GENERAL CHEMICAL COMPANY manufacture plus nation-wide service makes this not only a logical, but an advantageous source of supply. The Company invites your inquiry which, in your interest as well as ours, should be addressed to the sales office nearest you. We assure you of prompt and intelligent attention.

GENERAL CHEMICAL COMPANY

Home Office: 40 RECTOR ST., NEW YORK (Cable Address: Lycurgus, N. Y.)

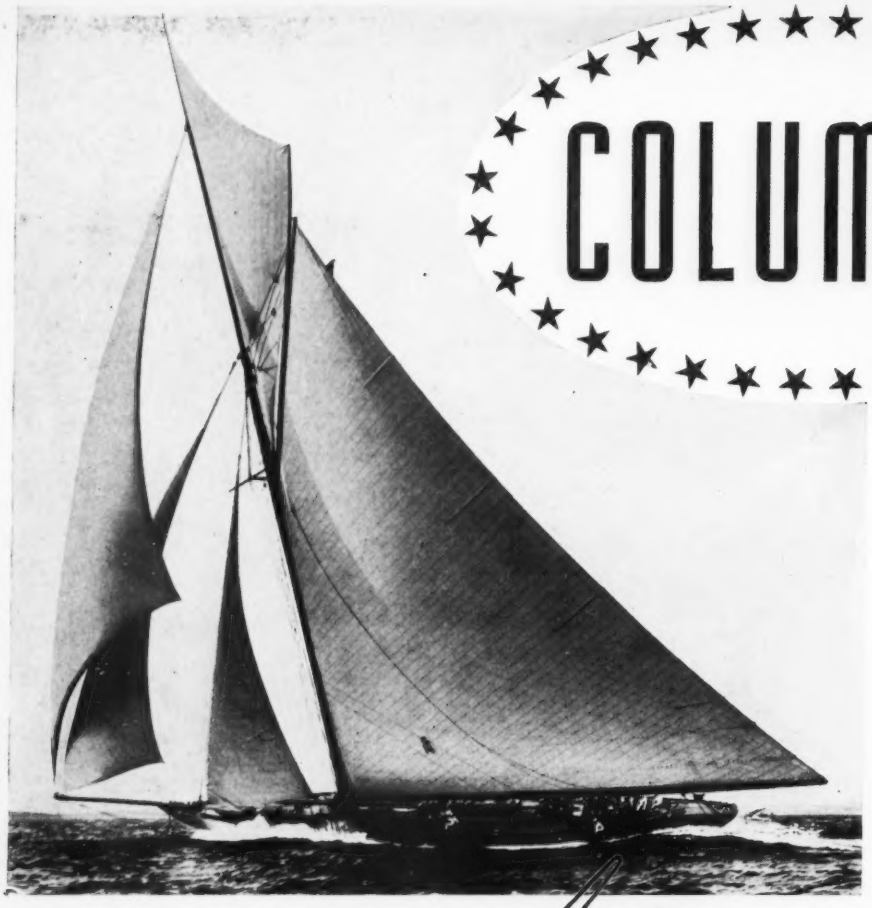
Sales Offices: ATLANTA, BALTIMORE, BOSTON, BUFFALO, CHARLOTTE, CHICAGO, CLEVELAND, DENVER, KANSAS CITY, LOS ANGELES, MINNEAPOLIS PHILADELPHIA, PITTSBURGH, PROVIDENCE, SAN FRANCISCO, ST. LOUIS. In Canada: THE NICHOLS CHEMICAL CO., LTD., MONTREAL, TORONTO

WHEN YOU WANT EXPERIENCED COUNSEL

IN THE USE OF

REMEMBER that Niagara Alkali Company was the first to produce Caustic Potash in this country and a pioneer in the production of Caustic Soda. Our experience in manufacturing these important products and in handling problems regarding their use covers more than thirty years. This long training can be a valuable asset in your plant. Niagara quality and Niagara service go hand in hand in hand to give you smoother, more satisfactory results in soap production.

Niagara
ALKALI COMPANY
60 EAST 42nd STREET, NEW YORK, N.Y.
Associated with Electro Bleaching Gas Co.
Pioneer Manufacturer of Liquid Chlorine



COLUMBIA

Achievement

SODA ASH
CAUSTIC SODA
SODIUM BICARBONATE
MODIFIED SODAS
CALCIUM CHLORIDE
LIQUID CHLORINE

In 1899 the famous yacht Columbia, called by many the grandest yacht of them all, successfully defended the America's Cup against Sir Thomas Lipton's first challenger, Shamrock I.

In 1899 another Columbia was formed, also to lead the way. In its history of thirty-seven years **THE COLUMBIA ALKALI CORPORATION** has ever set the pace in serving industrial needs for **SODA ASH, CAUSTIC SODA, MODIFIED SODAS, CALCIUM CHLORIDE.**

This year the service has been expanded to include **LIQUID CHLORINE** and **SODIUM BICARBONATE**, produced in completely new plants with the most modern equipment.

Our technical service is at your disposal.

THE
COLUMBIA ALKALI
CORPORATION

EXECUTIVE SALES OFFICES 30 ROCKEFELLER PLAZA • NEW YORK, N. Y.
Branch Sales Offices • BARBERTON, OHIO • 431-451 ST. CLAIR STREET, CHICAGO
CAREW TOWER, CINCINNATI • GRANT BLDG., PITTSBURGH • Plant at Barberton, Ohio

FOR YEARS our Rhodinol Coeur, Geraniol Coeur, Linalool Coeur have been the standard by which discriminating buyers judge quality.

Now PHENYL ETHYL ALCOHOL COEUR joins this merit class.

Don't take our word for its superiority but test it yourself. *First for odor.* You will find it totally free from any unpleasant impurities.

Then the chemical analysis. This shows no trace of esters, no chlorine, a specific gravity of 1.0230, a refractive index of 1.5327 and a solubility of 1 in 50 parts of water. This extremely high solubility is the concluding proof of its extreme purity.

No other commercial product equals those tests; we know of only one imported product that equals them but its price is far higher.

PHENYL ETHYL ALCOHOL COEUR *stands supreme and is offered at the price of the ordinary quality.*

van Ameringen-Haebler, Inc.

315 FOURTH AVENUE, NEW YORK

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AROMATIC CHEMICALS—ESSENTIAL OILS—FLAVORS—PERFUME SPECIALTIES—

You Will

COUNT THE CAMS

IF YOU HAVE KEPT TRACK OF THE DELAYS AND OTHER EXPENSE THEY CAUSE; IF YOU HAVE NOTED THE SHORT PRODUCTIVE LIFE OF CAM-OPERATED MACHINES; IF YOU PREFER SILENT OPERATION TO THE SLAM-BANG PERFORMANCE OF CAMS BEGINNING TO WEAR.

CAMS WEAR RAPIDLY AND ARE COSTLY TO REPLACE.

SOME TASKS MAY NEVER BE PERFORMED WITHOUT CAMS BUT CARTONING IS NO LONGER ONE OF THEM.

The

Constant Motion Cartoner

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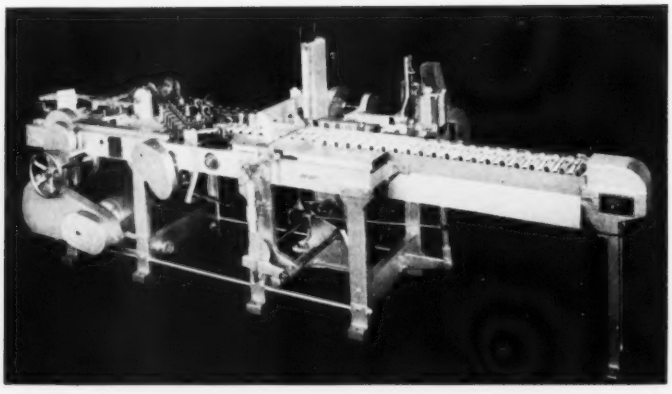
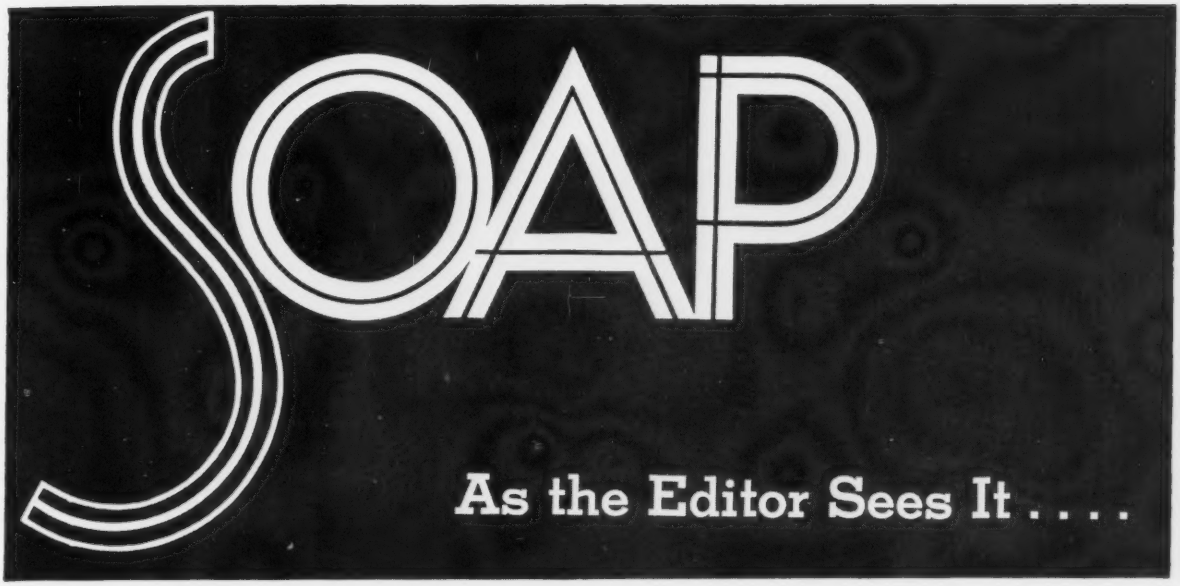
AND HAS MANY OTHER EXCLUSIVE FEATURES OF GREAT VALUE—SO MANY THAT YOU SHOULD KNOW ALL ABOUT THEM BEFORE YOU SELECT A CARTONING MACHINE.



R. A. JONES & COMPANY, Inc.

P. O. BOX 485 **CINCINNATI, OHIO**

We make presses for all shapes, sizes and varieties of toilet and laundry soap.



JUST what are "ordinary" soaps? Over the radio, we hear much about them. In soap advertising, we read that they are to be avoided at all costs. The public is advised to use this or that soap product because it does the work so much better than "ordinary" soaps. Where "ordinary" soaps chew up the clothes in the weekly wash, make hash out of silk stockings, roughen the hands, ruin the complexion,—all because they contain "lye, alkalies, and other caustic chemicals,"—the advertised soaps avoid this. And the inference is quite plain that other soaps except the product being advertised at the moment, fall in the class of "ordinary" soaps.

In our opinion, this type of advertising is distinctly harmful to the soap industry, and to the manufacturers who use it. The question is raised in the public mind that the use of any soap may be accompanied by dangers which heretofore have been kept in the dark by the soap industry. It is but a step to the conclusion that perhaps the safe course is to use as little soap as possible for any purpose.

The public unquestionably is fearful of the words, "lye," "alkali," "caustic," "acid," and the like. Has it not read on innumerable labels the sentence, "Contains no harmful alkalies, caustics, or acids?" And may it not begin to suspect that soaps on the whole are not the safe, harmless household products which they have been pictured for years? Maybe if these "ordinary" soaps are *very* dangerous and *very* harmful, the advertised soaps,—which when all is said and done, are also soaps,—may, themselves, be a little dangerous and a little harmful. To a puzzled mind, therefore, it would seem that the way to play safe is to avoid *all* soap where possible.

That we are not alone in our reaction to this damning of "ordinary" soaps, we have discovered by discussing the matter with a number of people. This type of advertising very distinctly gives the impression that "if you feel that you must use any soap, use ours." We can see only one ultimate effect,—a tendency to retard the sales of all soap.

AS an afterpiece of the Robinson-Patman Act, it is reported that Mr. Patman has drawn up ready for introduction at the next session of Congress a bill to prohibit all sales at retail by manufacturers or affiliated companies. In other words, as we understand it after reading the proposed bill, every article entering interstate commerce must be sold by the manufacturer to somebody else before it is in turn sold to the consumer. And the "somebody else"

cannot be an affiliated sales organization or in any way connected with the manufacturer.

Off hand, after reading our own editorial last month on what we believed some of the large chains might do to get around the Robinson-Patman Act,—that is, build up their own manufacturing organizations and become direct-to-consumer organizations,—we feel that Mr. Patman must have the same hunch which we had. And to cut off any move in this direction, there comes a new proposed law to forbid a manufacturer selling a consumer direct across a state line.

We certainly have no quarrel with the jobber, whom such a law would put in the driver's seat. The jobber is an essential and important link in our chain of merchandise distribution. Nevertheless, no restrictive legislation such as this can accomplish permanent good. We believe that if Congress were foolish enough to pass such a bill, the Supreme Court would toss it in the ash can at the first chance. Far simpler would it be for Mr. Patman to father a law to build a series of Chinese walls on all state boundaries to be guarded by the Army so that the flow of interstate commerce,—against which he seems to have a grudge,—could be effectively and completely dammed up.

BECAUSE they have refused flatly to supply material which would not come up to the standard expressed on the label, a reputable distributor of liquid soaps and soap specialties states that they have been practically forced out of the soap business. He asks what can be done about it. The answer is that nothing can be done about it as long as buyers will not take the trouble to avoid being cheated. The strange thing is that a buyer who orders ten drums of liquid soap would raise the roof if he received only nine drums, but the same buyer does little or nothing if he receives only a twelve per cent soap when he orders and pays for a twenty per cent soap.

Frankly, it is our opinion that some buyers must be tacitly hand in glove with this cheating on soap content of liquid soaps. As long as the label on the containers,—and the invoice,—specifically states "20 per cent anhydrous soap content", they do not care a great deal. They can buy a soap which is really only ten or twelve per cent at a cut price. They resell this as twenty per cent and figure that if they are picked up, they can always fall back on the container labels and their invoice. In other words, they really do not care about the quality of the soap if they can buy it cheaply enough, as long as their part in the crookedness can be referred back to their supplier.

What can be done about it? Educating the buyer to have his soaps tested,—every lot by his own laboratory, — would certainly help in cases where the buyer is honest, but dumb. But what about the buyer who tacitly agrees to cheating on soap content? That is a horse of another color.

BACK from Central America after a number of years there in charge of a soap plant, an American soap maker is full of praise for the people of the smaller countries to the south of us. However, he is not given to as much praise of their soap factories, stating that when Noah came out of the ark, he must have had better machinery with which to make soap than some of the Central American plants have today. He then tells us that he has had in recent years an opportunity to study soapmaking machinery manufactured in various parts of the world, and concludes that "there is no machinery made anywhere on this earth that will give as good results or stand up as well as that made right here in the United States." Discounting the fact that this individual is an American glad to be home again, his comments still make us feel pretty good.

All of which reminds us that over the course of the past few months five different foreign manufacturers of printing inks have had representatives in the United States to check up on the latest developments in American printing ink production machinery. Perhaps some of the Central American concerns would do as well to finance trips to the United States, check up on the latest developments in soap machinery, and bring their plants up-to-date.

With dying lavender plantations like the one above scattered all over the French producing areas, lavandin, a hybrid of spike and true lavender, assumes increasing importance to soap perfumers the world over.

LAVANDIN

By Dr. Ernest Guenther*

Fritzsche Brothers, Inc.

THE lavandin plant is a hybrid between true lavender (*Lavandula fragrans*) and spike (*Lavandula latifolia Chatenier*). As a typical hybrid, it combines the characteristics of the two parent plants. The color ranges between the deeper blue of lavender and the grayish tone of spike. The flowering period falls between the bloom of lavender in early August and the bloom of spike in September. From the hardy prolific spike, lavandin has inherited a greater resistance against damage caused by unsuitable soil, improper cultivating and unfavorable climate under which the very delicate lavender, during the past few years, has been severely afflicted. The chemistry and the odor of the essential oil of lavandin, too, proves the hybrid nature of this plant, oil of lavandin resembling both oil of lavender and oil of spike. From the former, oil of lavandin draws its relatively high ester content; from the latter, a certain harshness and pungency of odor which the sweet lavender oil lacks.

In Southern France the wild growing lavandin plant has been known for many years although its hybrid nature has generally been recognized only in relatively recent years. Formerly the farmer distillers used to consider the plant simply as a lower type of lavender and only for the past 15 years, the designation lavandin has been accepted as specifying a hybrid plant. As such, lavandin grows in medium altitudes between the low regions of spike and the high elevations which are favorable to the growth of true lavender. "Lavande grossiere" or in provencal "spigoue" are the names under which for many years, wild growing lavandin plants, to

* (Dr. Guenther recently returned from a five-months survey of the essential oil producing regions of France and other parts of Europe.—Ed.)

The full and luxuriant growth of the much hardier lavandin is in striking contrast to the dying lavender plantations. French cultivation of lavandin has been increased tremendously in recent years.

a limited extent, have been cut and distilled in migratory stills. The relatively small quantities of oil were as a rule not exported as such but mostly employed by producers and exporters for the cutting of lots of very high grade oil of lavender. This practice is still continued on an ever larger scale. True lavender oil has an ester content ranging from 30 to 55 per cent linalyl acetate and therefore oil of lavandin with its ester content of about 18 to 25 per cent very conveniently serves for bulking and standardizing types of cheaper lavender oils of lower ester content.

Until about 10 years ago, there existed on the part of leading experts on lavender oil quite a resentment against the production of lavandin oil. Men like Lamothe warned against the distillation of lavandin oil for fear that the employment of this oil might severely impair production of the more expensive lavender oil. Yet despite these first hesitations, lavandin oil continued to be produced and about 15 years ago, the first plantations were undertaken. During the last few years, cultivation of lavandin and distillation of the oil has increased enormously. In about a year or two, the newly started lavandin plantations will give their full yield of plant material, and at that moment the present ratio of yearly total production of lavender and lavandin will be reversed. Total production of oil of lavandin will soon exceed production of oil of lavender. So far this feature is not fully realized, especially not by the American soap manufacturers who are not yet entirely familiar with this relatively new oil and its great advantage of lower price. This price might even go slightly lower once the recently started plantations get into full production and larger quantities of lavandin oil are offered on the market.

Thus oil of lavandin is becoming of increasing importance, especially to the soap industry and it is chiefly for this reason that the present study is published. Like many others familiar with the beauty of genuine lavender oil, the writer has no intention of detracting from the value of true lavender oil, but one cannot deny the fact that during the last few years a great change has taken place in the production of French lavender oil. The average yearly production of 100 to 120 tons has fallen off to a present average of 50 to 70 tons. The causes of this surprising decline of lavender are still open to dispute. The fact remains that most of the lavender plantations which were started after the war, have either perished or are on the downward path, and as yet no remedy has been found to stop this continued decline. To a certain but more limited extent, this is true also of wild growing lavender.

A survey made in 1934 by J. Bordas, Ph. Joessel and Et. Aures of the Agricultural Station in Avignon in cooperation with Prof. Dumont of Nyons (Drome)[1], claims that this decline is not due to any parasitic plant disease but rather to the careless, in fact, ignorant way most new plantations have been started since the war. The high lavender oil prices paid in the years following the great war induced many peasants to start plantations of true lavender under conditions and in locations where lavender should never have been grown. Planting and cultivating of lavender requires infinitely more care and experience than is usually presumed. According to J. Bordas, Ph. Joessel and Et. Aures some fundamental rules must be followed:

1. Selection of proper geographical location and altitude; right exposure to the North affording protection against excessive sun and drought; well chosen local climate and right soil composition which must be silico-calcareous, easily permeable, neither too hot nor too humid.

[1] Parfumeries Moderne 28 (1934), 223.

2. Proper way of planting and cultivating; cautious selection of young but strong plants; very careful weeding out and cutting.

Right exposure to the North, proper composition of the soil and careful planting seem to be of prime importance. There is no doubt that pools of stagnant water remaining around the plants after a downpour are deadly to the plants.

During the summer of 1936, the writer, as in previous years, undertook a personal survey of the lavender producing regions and consulted many growers and distillers with long experience in the cultivating of lavender. There was a surprising divergence of opinion, sometimes directly contradictory, but most agreed that in general the views expressed by J. Bordas, Ph. Joessel and Et. Aures hold true. Some growers claimed, however, that there must also exist, at least in certain localities, a root disease because lavender roots pulled out appear white and almost powdery. Others attribute the premature dying of lavender plantations to the dropping of the upper stalks and seeds which they believe is caused by recent attacks of a caterpillar. This is true of certain sections.

General consensus indicates that there is a multitude of factors responsible for the rather alarming mortality of lavender plantations and that in the interest of the French lavender oil industry, the French government must take immediate measures to establish the nature of the cause and, if possible, find remedies. An old grower and distiller in Ballons (Drome) expressed the opinion that the decline of lavender is probably caused by some kind of disease which, however, was aggravated by the excessive drought of the past two years. A plantation started by him gave only one harvest, in the third year. Immediately afterwards, the plantation died.

Most interesting was an interview with a well versed agricultural expert in the Basses Alpes who attributes the premature mortality of lavender plantations to the following causes:

1. The plants were often planted too narrowly. The roots of lavender are easily damaged by plowing. Instead of deep plowing, the soil should only be hoed.

2. In most cases the plantations were fertilized too late in the season. It is often done in April during plant growth, instead of in November during the periods of abundant rains. Osmotic pressure thus forces the plants to give off their water content into the surrounding dry soil charged with fertilizing salts. The plants therefore dry out and perish.

3. It is still open to dispute whether new lavender plantations should be started from selected young plants or from selected old plants growing wild on mountain slopes. The older plants have withstood already all kinds of attacks and therefore give more assurance of continued life if planted in proper environments and cultivated with proper care.

4. It is by no means sure yet that lavender really is ready for cultivating. Lavender so far, has grown wild for ages on the mountain slopes and it might take many more plant generations until the plants accustom themselves to the richer and easier life in plantations and withstand it for a prolonged number of years.

WHATEVER the causes, the fact remains that practically all the rather carelessly and even some of the most carefully started lavender plantations are rapidly dying out and prematurely disappearing. Thus they do not give the hoped for returns and completely discouraged the peasants of the French lavender regions in replacing the disappearing lavender plantations with new ones. It must be remembered that the planting of lavender is a rather costly enterprise requiring the investment of quite some capital. Returns cannot be expected for the first three years and in order to write off the investment

The wild growing spike lavender, is also dying out in many sections. Experts disagree as to the cause, but whatever the explanation, it is disappearing like its cultivated counterpart.

and show profits, a plantation should survive, always depending upon the market prices of the oil, for 8 to 10 years. However, many plantations died after 5 to 6 years, some even earlier and therefore practically no new lavender plantations have been undertaken during the past five years. The growers will be induced to replant only if lavender oil, and therefore flower prices, are sufficiently high to run the risk even if the life of the plantations should be short. Practically it does not matter if the plantations die after 4 or 5 years as long as the financial return during those few years is sufficient. In other words, under present conditions, French lavender oil distilled from planted lavender flowers demands, and is depending upon, a high market price.

The cost of planted lavender, however, is not the only factor upon which the price of French lavender oil depends. In fact it has become a factor of less importance because the bulk of French lavender oil is distilled from flowers growing wild on the high mountain slopes of the lavender regions. Even during the years of numerous and plentiful lavender plantations, preceding the recent decline, two thirds of lavender oil was produced from wild and one-third from planted flowers. Collecting of wild growing flowers, however, is much more difficult, tedious and therefore more expensive. One man can cut and collect daily about 200 kilos of planted flowers but only about 65 kilos of wild lavender flowers. The quantities of available planted flowers used to be sufficiently large to prevent a too high rise in the prices of wild flowers and visa versa. Thus, the ratio between the harvest of wild and planted flowers acted as a sort of mutual brake.

This equilibrium has been entirely upset by the recent decline of the plantations. This year, less than 10 per cent of the lavender distillation material originated from plantations and during the coming year, the proportion will fall possibly to only 5 per cent. Thus wild growing lavender flowers nowadays form the bulk of material serving for distillation.

Now it must be noted also that strangely enough wild lavender flowers, too, have been suffering a decline. From some sections, where formerly wild lavender grew abundantly, the flowers are gradually disappearing, other sections thus far being less affected. On the way into the lavender mountains, starting from Grasse, it was customary to stop along the road between Castellane and Barreme and to pick a bunch of the lovely fragrant lavender flowers growing profusely near the road side. Today, one has to climb between the rocks and search to find a few lonely flowers.

To give a more exact idea, the following figures, which were given to the writer by experienced old time distillers, are cited:

	1930 Tons	1936 Tons
Flower production around Ballons	55	2
Flower production around Lachoux	80	6
Flower production around Aygalaye	20	2

In certain parts of the community of Sahune (Drome) were harvested:

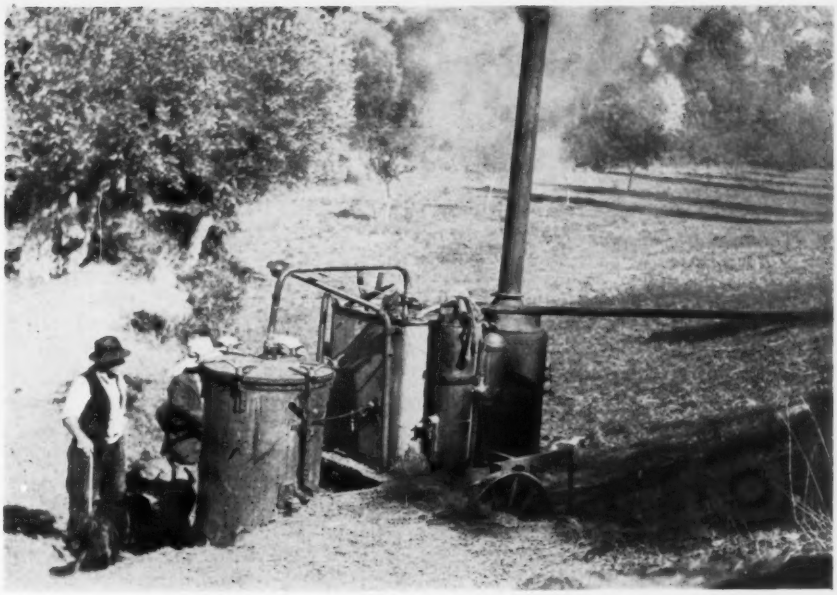
In 1928 . . . 35 Tons of flowers	In 1936 . . . 5.5 Tons
In 1928 . . . 42 Tons of flowers	In 1936 . . . 7.5 Tons

WHAT is causing the increasing disappearance of wild lavender flowers? It is still a mystery. A few theories are set forth by experts, none fully explanatory, some contradictory. Maybe it is a combination of several factors. Some claim that the soil is slowly getting tired of lavender, that during these past years it has been getting increasingly exhausted as far as lavender is concerned. Others attribute the gradual disappearance of wild growing lavender flowers in certain sections to the increase of weeds like Genet (Broom) which crowds out and suffocates the more delicate lavender flower. In former years, large flocks of sheep and goats used to graze on the mountain slopes and munch the weeds in preference to the fragrant lavender.

During the years of depression, the sheep raising in Southern France has suffered a serious set back and some of the mountain sections are almost deserted. The opinion that lavender is easily crowded out by weeds confirms the view that the wild lavender flowers, especially in the more accessible slopes, should be plowed under from time to time permitting the remaining lavender plants to acquire more room to grow freely. Other lavender experts believe that the wild growing flowers in past years were often cut too early and incidentally too low which practice damaged the plants. If on the other hand, the plants are harvested rather late in the season, they should not be cut too high. As far as insect pests and diseases are concerned, some lavender distillers are inclined to believe that they too exist in certain sections.

A more scientific explanation might be the following:— More than fifty years ago consumption and production of lavender oil used to be much less and most of the wild growing flower material remained untouched. It was used to growing without any cutting. During the following years, ever increasing quantities of wild flower material were harvested and the plants gradually became accustomed to being cut during the full flowering period when biologically speaking the plant has to exercise the greatest efforts. The cutting at that moment spared the plant much work and made it metabolically laggard. However, during the past few years of very low lavender oil prices, much of the wild lavender plant material has not been cut at all. Thus the wild plants were allowed to develop longer stalks and larger leaves. With this coincided two years of excessive drought which caused the larger stalks and leaves of the plants to evaporate a great deal of humidity. In other words, the plants exhausted themselves.

Considering all the factors involved, whatever their causes, we find that the plantations of lavender are almost gone and that wild growing lavender too, is disappearing in certain sections. Therefore the plant material has to be collected in more and more remote



In many of the lavender and lavandin producing areas it is found more efficient to bring the factory to the flowers rather than transport the flowers long distances to the factory.

sections where the wild flowers are not yet afflicted. Cutting in those regions, however, is more expensive and is undertaken nowadays only because of the high prices paid for the oil, thus allowing for greater harvesting expense. There is no reason to fear that lavender is disappearing but the fact remains that nowadays a relatively large quantity of lavender oil is distilled only because high oil and flower prices are interesting to the cutters and distillers. The moment that lavender oil prices should suffer a serious decline, production of the oil will fall off to very low figures.

During the last few years great efforts have been made to increase the employment of lavender oil in France. For instance, concentrated oil is retailed very widely in small bottles. This, to be sure, is an outlet stimulated by French demand and not by export to the United States. For employment in American soaps, lavender oil is at present too expensive. To be sure, we speak only of pure lavender oil and not of adulterated oils, under which form nowadays, unfortunately most lavender oils are marketed.

In the light of these factors, it seems logical that the planting and cultivating of the much hardier lavandin should have increased tremendously during the past few years. True, oil of lavandin does not possess the delicate sweetness of lavender oil. It is of harsher character and from this point of view, the increasing application of this lower priced substitute for lavender oil must be regretted. But to the growers, the cultivating of lavandin seems to offer obvious advantages which might be counteracted only by over-production.

The planting is cheaper, the plants are hardier and more resistant, plantations suffer less from mortality, the plant is very prolific giving a high yield per acre, cutting is easier and therefore less expensive, and the yield of oil of lavandin upon distillation is better than the yield of oil of lavender. All these features appear so tempting to the growers, that there is a danger of overproduction.

As mentioned already, oil of lavandin was produced by peasant distillers, in small quantities, as long ago as 25 to 30 years. At that time little was known about the botany of this hybrid and it is possible, in fact, probable, that the plant material was distilled together with true lavender plants of lower quality. Very likely the lots of French lavender oil of very low ester content (about 20 to 30 per cent linalyl acetate) offered in those days, were mixtures of true lavender and lavandin oil, or lavandin oil alone[1]. Only later the hybrid nature of lavandin was discovered, and from then on a distinction was made between true lavender (*Lavandula fragrans*) and the hybrid lavandin.

Natural hybridization takes place spontaneously in the regions where wild growing lavender and spike plants overlap. This natural cross-pollination might be caused by the wind, but much more likely by the bees which are greatly attracted by, and swarm abundantly around, these plants. True lavender in Southern France grows wild in altitudes from 500 to 1200 meters, spike not higher than 700 meters. Therefore the natural habitat of wild growing lavandin is in the altitude from 500 to 700 meters. The first centers of lavandin oil production using wild growing plant material were:

Dept. Basses Alpes	Allemagne—Riez—Reillannes
Dept. Var	Chateaudouble—Rians—Aups
Dept. Vaucluse	Gordes—Malaussene
Dept. Drôme	Buis-Les-Baronnies—Saillans
Dept. Lozère	Meyrueis

[1] We must not confuse these oils with those types and limited lots of true lavender oil produced around the Franco-Italian frontier and in the Italian Piedmont, which have a similarly low ester content.

(To be concluded)

VITAMIN SOAPS

A study of the reasons for incorporating Vitamin F in toilet soaps, and what such soaps are designed to accomplish.

By KATHRYN GLENNON

Pharmacist, Chicago Memorial Hospital

The question has been asked a hundred times during recent months—". . . just what are these vitamin soaps?" Do they really have merit, or are they just something else about which to build a new sales and advertising story? There is no doubt but that the first vitamin toilet soaps on the market were viewed with something more than suspicion. The first announcements of the incorporation of vitamin F in soap were in many quarters accepted as just another advertising idea. It was not known that behind the announcements were the results of several years of research work by dermatologists, chemists, and pharmacists. A brief report of some of the research conducted at the Chicago Memorial Hospital clinics with vitamin F soaps which is reported here, appears to have a bearing in answering some of the questions which have arisen.—*The Editors.*

What is vitamin "F"?

IT IS frequently instructive to attempt an evaluation of empirically established ideas in the light of newly announced discoveries. An instance of this sort is the discussion on *Sapo Mollis* which appears in the current issue of the United States Dispensatory, and the reinterpretation of some of the statements made with our present advancing knowledge of the important part played by certain unsaturates which have been called vitamin "F".

Burr and co-workers fed white rats a fat free diet consisting of varying amounts of pure casein, sucrose, a salt mixture and vitamins A, D, and E obtained from the non-saponifiable fraction of high grade cod liver oil and wheat germ oil. On such diets, male rats reach only 70 per cent of their expected normal weight, and female rats reach only 80 per cent. A scaly condition of the skin makes its appearance between the 70th and 90th day of such feeding. Later, the tip of the tail becomes inflamed and swollen and the whole tail soon develops heavy ridging and scales. The hind feet become red and usually swollen, in some cases large scales appearing, particularly on the dorsal surfaces. The hair on the back of the body becomes filled with dandruff. There is a tendency to lose the hair, especially about the face, back and throat. Sores frequently appear on the skin.

Increasing the amount of vitamin A and D increased the difficulty, due, it seems, to the fact that the vitamins tended to better the weight and condition of the animals, thus creating a greater demand for fatty acid supply.

Wesson and Burr obtained high respiratory quotients a few hours after feeding fat free diets. This indicates that carbohydrates are being transformed into fats. However, the rats continue to suffer from a fatty acid deficiency indicating in turn that the animals are unable to synthesize the particular fatty acids required.

The conclusion was reached first that linoleic and linolenic were the particular unsaturated fatty acids involved, and they were thought to be equally effective and interchangeable. At present, only linoleic acid is thought to be effective, and that probably in only one of its many isomeric forms.

The results of Burr and his co-workers have been severely criticized. One criticism has been that the skin effects are variable and may be produced by other dietary deficiencies. Burr and Brown have commented on these criticisms and emphasize that unsaturated fat deficiency is characterized by a late failure in growth after an early period of rapid growth in the presence of excess growth factors. This failure is attended by a high percentage of kidney lesions, abnormal gas exchange and increased water consumption.

Evans, Lepkovsky and Murphy confirmed the work of the Burrs in all of its major essentials and designated the unsaturated fatty acids responsible for the condition,—"vitamin F". This term was not immediately accepted by vitamin workers, partly because of its confusion with B_1 (water soluble), and partly because the work seemed to require additional confirmation. If, as now seems possible, the new vitamin F is meant to designate the single isomer of linoleic acid that stands related to the Burr fat deficiency syndrome, this naming will be as justifiable as vitamin C for ascorbic acid. It is apparently in this sense that Harris too refers to the new vitamin "F" in his recent book "Vitamins", and that the Annual Review of Biochemistry likewise uses the term vitamin F.

A fat-deficient diet normally causes deficient growth in test animals, accompanied by a scaly skin condition, excessive dandruff, as well as loss of hair.

Rats on this same diet, but receiving daily applications of vitamin soap lather, were free from scaliness. Other soaps produced even more intense scaling.

It has been known for some time that the epidermis contains abundant lipoids; and that the lipoids of the integument are characterized by a significantly high proportion of unsaturated fatty acids. To this information, Shepherd has added confirmatory evidence and has apparently indicated that part of the unsaturates found in normal healthy skin are in the form of vitamin F. She found, for example, that the dried skin of normal rats prevented the appearance of the Burr fat deficiency syndrome when added to fat free diets, but that the dried skin from fat deficiency rats failed to prevent the symptoms. Yet, both skins contain unsaturated fatty acids.

Shepherd utilized the information obtained from medical sources that ointments with linseed oil base, as with lard base, were helpful in eczema when applied locally. Linseed oil and lard may both be rich sources of vitamin F, though inconstantly so. This is in itself another evidence favoring the belief that only one isomer of linoleic acid is responsible for the action.

Instead of using vitamin F in ointment form for the cure of eczema, she used it to prevent a harsh, rough and dry skin which is probably frequently a pre-eczematous stage. She incorporated vitamin F in cosmetic creams. There are many such creams now available and the results that are reported from their use are most encouraging.

Sapo Mollis

According to the United States Dispensatory, linseed oil must be used in the preparation of *Sapo Mollis*. In

the 9th revision, however, the experiment of using cottonseed oil was made. So unsatisfactory were the results that the present edition has returned to linseed oil.

Sapo Mollis has always enjoyed excellent popularity among many dermatologists as a topical remedy in those forms of skin trouble acompanied by disturbances of sebaceous secretion, such as seborrhoea, and has been widely advocated for use in the treatment of acne and of chronic eczema. In the light of the work of the Burrs and Shepherd, the empiric findings that cottonseed oil is not as satisfactory as linseed oil seems to permit of newer interpretations of the merits of *Sapo Mollis* and the possible involvement of vitamin F in such merits.

According to the Dispensatory, some of the value of *Sapo Mollis* is attributed to its ability to remove fat more thoroughly from the skin than do other soaps. Yet, the removal of fat from the skin is not always accompanied with desirable consequences. Thus, a coconut oil soap likewise freely removes fat from the skin, but leads to a drying that is objected to by dermatologists.

Vitamin "F" Soap Experiments

SAPO MOLLIS is easily prepared by following the directions given in the dispensatory. A linseed oil was procured which, assayed biologically according to the method outlined by Shepherd and Linn, was obviously deficient in vitamin F. Three 400 gram portions of the oil were prepared. The first was the oil as obtained. The second was the oil to which 125 vitamin F units per gram were added. The third was similar oil to which 250 vitamin F units per gram of oil were added.

Accordingly, three soaps were produced, the first showing practically no vitamin F, the second showing about 50 units of vitamin F per gram, and the third showing about 100 vitamin F units per gram. These values were confirmed by biological assay.

Four groups of rats were arranged, 30 rats to each group. At weaning age, 28 days, all the rats were placed on the Burr fat deficiency diet.

Rats in group 1 were used as positive controls. Rats in groups 2, 3 and 4 were treated with the lather produced from 100 milligrams of soap, the lather being brushed on the tail of each animal. The lathering continued for five minutes daily with each animal. The soap was then rinsed away with distilled water. A small camelhair brush was used to apply the lather, each animal having its own individual brush.

Whereas the method for biological assay as proposed by Shepherd and Linn continues the application of the material to be tested for only ten days, in this experimental series the lathering was continued for one month (30 days).

At the end of thirty days a comparison of the animals showed:

1. That the animals in the control group receiving no soap applications developed scaliness of the tail which was distinctly discernible in all the rats.
2. That the animals in the second group, receiving the lather from 100 milligrams of *Sapo Mollis* which was vitamin F deficient, showed uniformly more intensified scaling than that found in the control group. This was accompanied by a harshness and dryness of the skin.
3. That the animals in the third group, receiving the lather from 100 milligrams of 50 vitamin F unit per gram of *Sapo Mollis*, in nearly every instance were free from scaliness. A few showed scaliness, which was not as pronounced, however, as that shown by the control group.
4. That the animals in the fourth group, receiving the lather from 100 milligrams of 100 vitamin F unit per gram *Sapo Mollis*, were all free from scaliness.

All of the animals were chloroformed. The tail skin will be analyzed for total fat content, and when dried, will be fed to fat deficient rats to determine the presence or absence of vitamin F.

This experiment cannot be considered as finally conclusive; but it does tend to support the hypothesis that *Sapo Mollis* can be effective because of its vitamin F content. Further experimenting seems desirable and is progressing satisfactorily at this time.

Vitamin "F" Soap in the Clinic

COINCIDENT with the seemingly significant animal experiment is the following correlated clinical evidence which is accumulating on the treatment of acne, seborrhoea, and chronic eczema by physicians who have volunteered to use the soaps medicinally. *Sapo Mollis* containing 100 Shepherd-Linn units of vitamin F per gram is conspicuously effective when used on the condition mentioned; whereas that known to be vitamin F deficient is correspondingly ineffective. These reports require the careful analysis of the physicians who are studying the effects of the two kinds of *Sapo Mollis* and will be reported, no doubt, in the proper medical channels. Permission to make mention of this fact, however, has been accorded for this preliminary report.

Soap Employment Up

A recent survey of employment in various American industries, conducted by the *New York Sun*, indicates a high level of activity in the soap industry as compared with predepression levels. Figures given by the *Sun* include the following comparisons between 1929 and 1935:

	Average Number of Employees for Year 1929	Average Number of Employees for Year 1935
Procter and Gamble Co.....	5,750	6,575
Colgate-Palmolive Peet Co....	4,834 (in 1930)	5,167
Andrew Jergens Co.....	424	850
West Disinfecting Co.....	633	725
J. B. Williams Co.....	140	142

DOG SOAPS

A survey of dog soaps and the dog soap market based on a series of interviews with dog owners, dog soap manufacturers and experts in the care of the dog.

WHAT are the sales possibilities in the dog soap market? How big is this market and how well is it being served? What is the best type dog soap, what is the best package and what odors are preferable? Are the insecticidal soaps really effective flea treatments? The answers to these and a series of other questions have been sought in recent weeks in a number of interviews with dog owners, dog soap manufacturers and veterinarians.

As to the size of the market itself, this is best estimated on the basis of the current dog population. The American Kennel Club estimates that there are 15,000,000 dogs in the United States, of which about 3,000,000 are in the thoroughbred class. As the owners of these thoroughbreds have each spent from ten to several hundred dollars on their pets, they can normally be expected to be receptive buyers for specialized products designed to keep their animals in the best condition. It is estimated that of the remaining 12,000,000 dogs, perhaps three or four million are house pets whose owners think as much of them as the most expensive thoroughbred. And where the average householder keeps down in the nickel class for toilet soaps for family consumption, the best is none too good for the family dog.

The average three or four ounce cake of dog soap sells anywhere from twenty to thirty cents and the six ounce bottle of liquid dog shampoo will sell in the neighborhood of thirty-five cents. Cost seems to be no particular consideration where the family pet is concerned and the tendency is rather to buy the best possible product, rather than one which offers the advantage of economy.

THE ideal dog soap, apparently, would be one that would clean perfectly, destroy "doggy odors", kill the fleas, improve the sheen of the coat, medicate the skin, and finally, a point often lost sight of, be unobjectionable to the dog. The ideal product, fulfilling all these conditions, has, unfortunately, never yet been developed. The minute a product is offered to cover "doggy odor", forerunner and perhaps suggestive of the more renowned term "B.O.", we get another and more powerful odor, which if not objectionable to the dog owner, is certainly objectionable to the dog. Dog soap makers often seem to forget that the dog's nose is a much more sensitive instrument than the human nose, and that the highly bred dog is very sensitive to foreign smells. In a potash base soap, which is preferable in the sense that it washes out of the dog's coat easily, the compensating disadvantage appears that it is a very difficult matter to incorporate an insecticidal ingredient with any assurance that it will still be effective by the time it is applied to the dog.

Since the manufacturer of an all-purpose dog soap seems to be such a problem, the logical answer then, and one which many of the dog soap makers have adopted, is a series of dog soaps for various uses. The types which may be offered include the cake, liquid and powdered varieties of soap, with an additional possibility in the dog dry-cleaning powders that some veterinarians favor because they eliminate the danger of the dog taking cold in bad weather.

For routine washing, most veterinarians recommend an ordinary castile or superfatted toilet soap, their specific reference to "castile" apparently representing the popular medical conception of a mild, non-alkaline soap, rather than any real insistence on a pure olive oil base. The necessity for a mild soap for dog use is apparently a real one, for the skin of a dog is definitely more sensitive than the human skin, a point often ignored or possibly not even known by dog soap makers. Dog soap should be at least comparable in quality with the better shampoos for human use, and should meticulously avoid excess alkali. A base containing 20 to 50 per cent coconut oil content is customarily used to give a soap of good lathering power. Straight cold-made coconut oil soaps, however, are in general too harsh.

Many dog owners state that they prefer the liquid to the cake type shampoos, as the former, with their potash base, wash out of the dog's coat more easily, leaving no soap curds to mat the coat. The preponderance of the cake-type shampoo in the dog soap field seems to be based on the ease with which insecticidal or medicinal ingredients can be incorporated in the cake form, and the desire of the dog soap maker to have more sales points to offer in favor of his product. He would do better, we believe, to make his leading seller simply a mild shampoo, recommended for washing alone, leaving the insecticidal and medicinal ingredients and added claims for other items in his line.

And before leaving the ordinary dog soaps, a note of caution regarding recommendations for use is in order. Experts in the care of the dog declare that too frequent washing is far more dangerous than an insufficient number of baths. They say that in the summer the maximum should be twice a month, and in the colder months, once a month. More frequent washing tends to dry out the skin and spoil the coat.

TURNING to the insecticidal soaps, a highly controversial field is entered. Practically every soap maker in describing his dog soap uses the phrase, "kills fleas", yet most users report that the average dog soap is distinctly an ineffective flea treatment. The usual insecticidal ingredient is a concentrated extract of pyrethrum or derris which in itself would be a very effective treatment. Applied as it is in a soap base, however, it is questionable if it retains much or any of its insecticidal value by the time the lather reaches the dog's coat. The pyrethrins of the pyrethrum and the rotenone of the derris root tend to break down under the action of the alkali present in the soap, destroying the insecticidal properties that the soaps may have had when freshly made. This is particularly true in the case of liquid soaps.

Perhaps the best type of insecticidal dog soap so far encountered is an imported product of the powdered type. It contains a mixture of pyrethrum and derris powder mixed with powdered soap, which in its dry state has less tendency to affect the insecticidal ingredients. When used in substantial quantity, worked up into a heavy lather, and the lather allowed to stay on the dog's coat for as long as twenty minutes, it proves to be a fairly effective treatment for eliminating fleas. It would still seem to be a more sensible procedure, however, to use an actual insecticide for flea elimination, rather than a combination of soap and insecticide which at best is a poor substitute.

Turning to medicinal soaps for the dog, it is found again that many manufacturers make broad general claims of medicinal properties for the soaps which they sell as ordinary dog shampoos. There is a definite, although rather restricted field for medicinal dog soaps, but there is very little point in incorporating medicinal ingredients in, and making medicinal claims for, the general run of dog soaps. Medicinal soaps should be designed and sold for use in combatting specific skin troubles common to the dog—eczema and the various types of mange; but to offer a carbolic or mercuric soap as a product for routine use on dogs untroubled

A representative group of the better known dog soaps includes cake shampoos, liquid shampoos packed in glass or tin, and a dog dry cleaning powder supplied in a shaker top tin can.

by skin diseases falls not only in the class of attempting to deceive the dog-owning public, but is cruelty to animals as well. Carbolic soaps in particular are especially objectionable to most dogs, and the lather getting into their eyes is particularly painful and sometimes even blinding. The reader may think, perhaps, that this comprises undue excitement about the sensibilities of the average dog, but the dog soap manufacturer must bear in mind that any soap to which the dog objects, his master is not liable to buy a second time.

This brings up finally the question of odor. One of the writers on the care of the dog who seems to present the best combination of knowledge of dogs and soaps as well, Dr. John L. Leonard of the New York City Department of Health, advises the dog owner to avoid dog soaps which are perfumed. Perfume is unpleasant to the dog, he warns, as are strong odors of almost all kinds. He warns the dog owner to beware of the patent dog soaps, not only because of the dangerous ingredients which he says many of them contain, but on the grounds of offensive odor as well.

As one of the prime functions of a dog soap must be, however, to eliminate "doggy odor" and to prevent its hasty return, some sort of a deodorant, or reodorant, is commonly used in most of the dog soaps on the market.

From the above comments on medicinal soaps it would seem desirable to avoid the heavy medicinal odors of the tar or carbolic type. A mild pine or cedar odor would be preferable, less offensive to the nostrils of the dog and his owner as well.

To round out the subject of dog washing preparations, it might be well to add a few observations on the dog and cat dry-cleaners now favored by some pet owners. These are customarily made from talc, borax, chalk, fullers earth or a mixture of these preparations, and may also include a powdered insecticidal ingredient, such as pyrethrum or derris. They are brushed into the coat, where they absorb some of the dirt and skin excretions. These are subsequently taken out with a second brushing. For full-time use the dry-cleaners are found to be unsatisfactory, but as a change from washing, particularly in cold weather, they fill a definite and useful place. The manufacturer of dog soaps who offers a line that is at all complete should certainly include the dry cleaner in his list.

METALLIC SOAPS

By Harold Silman
London, England

TO the ordinary soap manufacturer, the metallic soaps are not soaps at all, because they play only a very minor part in the field of detergents. Nevertheless, they are true soaps inasmuch as they are salts of the fatty acids. To a considerable extent, they account for much progress in the manufacture of pure fatty acids which progress has been coincidental with the study and development of metallic soaps during comparatively recent years. New uses have been developed for the metallic soaps in the paint, printing ink, textile, cosmetic, pharmaceutical, and other industries. The chemistry of their manufacture has a decided interest for the modern soap maker. The chemistry of their uses, particularly their catalytic activity, may have a direct bearing on some of the rancidity problems of the soap industry.

Perhaps the chief reason for the increasing importance of the metallic soaps is the fact that it is now possible to separate and isolate many fatty acids from the mixtures in which they occur in nature, making them available on a commercial scale. Hitherto, owing to the vague and uncertain composition of the fatty acids, the metallic soaps were by no means well-defined substances. They were generally mixtures of several soaps and one batch often differed widely in composition and properties from another. This accounts for some of the discrepancies in the earlier literature on the subject. A great many metallic soaps are now prepared for specific purposes on a large scale, and they have extensive uses. There are many products available which are crystalline solids, differing very little in chemical composition from that theoretically required by the formula of the pure salt.

The term "metallic soaps" as used here applies to the soaps of a metal radical other than sodium or potassium. These metal radicals may cover an extremely wide range, and include calcium, barium, strontium, magnesium, copper, cobalt, manganese, nickel, cadmium, antimony, arsenic, chromium, silver, etc. Certain metals such as mercury, iron, etc. which commonly form two series of salts in which the metal exhibits different valencies, similarly form two series of soaps, such as, for example, the mercuric and mercurous soaps.

The acid radical can similarly be one of a very large range of fatty acids and related substances. Among the commonest are stearic, palmitic, oleic, lauric and naphthenic acids. Very often mixtures of fatty acids, or sometimes the fats themselves or hydrogenated oils, are utilized in the manufacture of metallic soaps where pure soaps are not necessary, and the resinates, linoleates, etc. produced in this way find extensive application in the paint, printing ink, and other industries.

The paint and ink industries are large consumers of metallic soaps in the form of driers, and even in these industries, fairly pure soap is desirable as far as possible to allow of easier standardization. Moreover, an impure acid mixture will tend to produce a dark-colored soap which would not be suitable for adding to a light paint, ink, or varnish.

The two methods of preparation of metallic soaps in common use are the methods of precipitation and fusion.

The precipitation method consists of the double decomposition of a warm solution of an alkali salt of the fatty acid with a solution of a metallic salt. Sometimes the ammonium salt of the fatty acid is employed. The alkali salt of the fatty acid (or soap) may be made by direct saponification of the oil, but when a pure soap is required the simple fatty acid must first be isolated.

A slight excess of the solution of the metallic salt must be used to ensure that the reaction will go to completion, and the process may be carried out either in a tin-plated vessel or a wooden tank. The voluminous precipitate of soap which forms is filtered off. In the case of well-defined soaps, such as palmitates, stearates and resinates, these may then be treated in a filter press with water and a pressure of 3 to 4 atmospheres applied to remove the soluble salts. After about 20 minutes, the precipitate is dried on cloth filters first at 40° C. and then at 60° C.

Much of the water is strongly adsorbed so that a fair amount remains. Indeed many soaps are decomposed if an attempt is made to dry them completely. For example, copper soaps decompose to liberate the oxide of the metal, while mercury soaps are reduced to free mercury. In general the water content varies from as little as 0.3 per cent to as much as 7 per cent. Excessive drying is, in fact, not desirable as the solubility of the soap may also be decreased thereby. Examples of the commercial methods used in the production of a few of the more commonly used soaps will be given.

The fused soaps are prepared by simply heating the

The metallic soaps find wide use in the manufacture of paints, varnishes, and printing inks, both as bodying agents and dryers. Their catalytic activity may have a direct bearing on some of the rancidity problems encountered in the soap industry.

free fatty acid with the oxide or hydroxide of the metal, the latter being in slight excess. Occasionally the sulfate, borate, acetate, etc. of the metal are employed. The advantages of fusion with the oxide or hydroxide of the metal is that direct combination takes place without the formation of extraneous salts which have to be removed. When a neutral fat is used instead of the free fatty acid, the procedure is similar except that a somewhat higher temperature (135° - 160° C.) is necessary, care being taken to avoid charring. The liberated glycerin is removed by washing with water. This method is suitable especially for the soaps of zinc, copper, cadmium and aluminum.

Whereas the precipitation method gives a light voluminous powder which may usually be fairly well purified from salts, etc. the fusion method gives a compact mass rather darker in color and less well-defined in composition. The fused soap is, however, more readily dispersible in solvent, which is an important consideration in the paint industry. For this reason, the soaps are often precipitated at a fairly high temperature, which results in a colloidal substance being thrown down, instead of the granular precipitate otherwise obtained. The voluminous precipitate of metallic soap is also sometimes fused and ground in order to make it more suitable for incorporation in ink or paint.

Soaps of a high degree of purity are not generally required, but they are sometimes manufactured for the preparation of pharmaceutical products, cosmetic specialties, or to meet the occasional demands of industry. A soap of this description may be made by the double decomposition of an aqueous solution of the metal acetate with an alkali salt of the fatty acid.

An alcoholic solution of the fatty acid is taken and the theoretical quantity of caustic soda added. The greater part of the alcohol is then evaporated off, and water added. If cloudiness becomes apparent on the addition of water, sufficient alcohol is added to clarify the solution and prevent the formation of acid soaps. An excess of some 2 to 5 per cent over the theoretical of a solution of the acetate of the metal is added with stirring when precipitation of the metallic soap takes place immediately. A temperature of 60° C. is generally suitable. The temperature influences the physical characteristics of the soap to a considerable extent.

(*Turn to Page* 77)

New Products

Above — New Wrisley Christmas package for men. Box top is in grey tweed, with red contrast. To retail at $1.00.

◆

Shell takes cleaner and polish packages out of the closet class. Small, handy containers, easy to keep clean, were chosen, embodying the sure-grip style. Re-design by Owens-Illinois.

Convinced of a large potential market for shaving bowls, Colgate-Palmolive-Peet Co. now offer shaving soap in this package, perfumed with their well-known "Cashmere Bouquet."

and

Packages

Above—One of the first of the vitamin F soaps, introduced by Eavenson in a special sale at a New York department store. Said to be effective in preventing dandruff, brittle hair, and dry skin.

Pacific Coast Borax Co. has just re-designed the container for its "Boraxo" hand cleaner. The new package, by Owens-Illinois Can Co., is strictly modern in style, with its contrasting colors.

Hewitt's cold cream soap is repackaged in a new grey silver box made up specially for chain store sale. The tablets themselves are good quality French milled soap, six to the box.

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NEWS . . . . . .

Pacific Coast Soap Plant

The large refinery of Pacific Coast Borax Co. at Wilmington Harbor, Los Angeles, has been converted into a soap factory which is in production on "Boraxo". This new hand cleanser which was introduced on the Pacific Coast only a year ago has now achieved national distribution. Nearly three hundred workmen are being employed on three shifts at the Wilmington Harbor plant.

New Fitzpatrick Product

Fitzpatrick Brothers, Chicago soap and cleanser manufacturers, are now introducing a new vegetable oil shampoo for home and beauty parlor use. Plans for marketing the new product, which will be known as "Prize Shampoo," are still in the formative stage. Fitzpatrick reports a lively interest in the product among beauty parlor operators as a result of the company's display at the recent cosmeticians' convention.

Edward Ewer Dies at 67

Edward Ewer, 67 years of age, died October 7th, at his home in Flushing, L. I. For the past 30 years, Mr. Ewer had been connected with John T. Stanley Co., Soap manufacturers, New York, where he was in charge of the towl and linen supply soap department. Death resulted from a heart ailment. He is survived by a sister, one daughter and two sons.

Palmolive Features Dionnes

Supplementing other current national advertising schedules for "Palmolive" soap, Colgate-Palmolive-Peet Co. has just inaugurated a nation-wide spot broadcasting campaign. Three other "Palmolive" soap advertising campaigns were recently inaugurated, one confined to national magazines, another to newspapers, and the third to radio. In each of these campaigns, the company is stressing the exclusive use of "Palmolive" by the Dionne Quintuplets.

Talks on Detergency

Foster Dee Snell, New York Consultant, addressed the American Association of Textile Technologists on October 7 at the Hotel Wolcott, New York. His subject was "Some Factors in Detergency".

Soap Meeting Dec. 3

The tenth annual meeting of the American Association of Soap & Glycerine Producers will be held in New York, December 3. A special invitation has been extended to non-members to be present, as a representative meeting of all soap manufacturers is desired.

Plan Soap Factory

Plans for the construction of a factory in Winnipeg, Manitoba, have recently been announced by Northern Soap Co., Ltd.

Markets New Soap

A new soap which has not yet been named has recently been introduced by Aisen Laboratories, Oscawana-on-Hudson, N. Y. The soap is said to be free from chemical irritants and to possess unusual cleansing and healing properties.

Hold Oil Trades Dinner

The annual dinner of the Oil Trades Association of New York was held the evening of October 27 at the Hotel Waldorf - Astoria, New York. A reception preceded the dinner which was followed by a program of entertainment.

Soap Employment Up

Employment in the soap industry registered a sharp gain in August, the index advancing to 104.1 from the July reading of 94.6. This also represents a gain from August, 1935, when the index reading stood at 98.0. The pay-roll index for August, 1936, also showed a substantial gain, advancing to 102.8 from the July reading of 93.5. This compares with 93.8 for August, 1935.

Harris Premium Offer

Harris Soap Co., Buffalo, is cooperating with Hygrade-Petroleum Co., Buffalo, in a special premium offer. A Revere copper skillet is being offered for four box tops from Harris "Oxygen Soap Flakes" and 79 cents in cash, the skillets being displayed and distributed in 100 Hygrade Gulf gasoline stations in the Buffalo area.

New Detergent Concern

Peerless Soap & Chemical Co., Detroit, has just been organized by S. J. Caplan and H. Schakne to manufacture a general line of industrial cleaners.

F. T. C. Order Against Hewitt

Hewitt Soap Co. and its subsidiary, Crown Soap Co., both of Dayton, O., have been ordered by the U. S. Federal Trade Commission to stop certain unfair trade practices declared to be in violation of the Federal Trade Commission Act. These practices include misbranding, fictitious price marking, misrepresentation, and misleading advertising. The order to cease and desist prohibits the Hewitt and Crown companies from representing by exaggerated price markings that their soaps have values in excess of the prices at which they are ordinarily

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sold. Other representations prohibited in the order are that the soaps have medicinal properties which they do not in fact possess, or which they do not have in sufficient quantities to make them effective as represented; and that their soaps are made especially for physicians' or nurses' use, or are "medicinal" or "medicated," or made according to a doctor's formula, when these are not the facts.

◆

C-P-P Employee Vacations

Annual vacations with pay to hourly wage employees of Colgate-Palmolive-Peet Co. have just been approved by the company board of directors. All hourly wage employees who have served one year or more will be given a week's vacation each year with full pay.

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Soap Firm at New Address

Sphinx Chemical Products Co. and National Soap Service Co. are now located at 875 Valencia St., San Francisco, having moved recently from 1783 Hayes St.

◆

P & G Sales Meeting

Procter & Gamble Co. held an Ohio and Indiana district sales meeting and luncheon at the Hotel Alms, Cincinnati, Oct. 3., with Campbell Dinsmore, district sales manager, presiding.

◆

Cosmetic Sales Rise

An increase of 15 to 30 per cent over last year's total was reported in sales made at the second annual Perfume and Cosmetics Buyers' Conference held recently at the Hotel Roosevelt, New York. A rise of 15 to 25 per cent in sales of holiday toilet goods is anticipated. The Perfumery and Cosmetic Buyers' Association has sent out questionnaires in an attempt to determine the reaction of buyers to the fair trade practice rules submitted to the Federal Trade Commission and plans to send a representative to the F. T. C. hearing on fair trade practice rules of the toilet goods industry to be held shortly in New York.

P & G Win Canada Suit

The offer of photographs as a premium in connection with the sale of P & G soap in the Montreal market has been held to be within the Canadian law in a recent decision by Chief Justice Greenshields in the Court of King's Bench, Montreal. Action was taken by the authorities following the P & G offer last spring, under the interpretation that the company was offering trading stamps, an offense under the criminal code. The judge declared the offer a pure and simple advertising scheme.

◆

Soap Products Reorganized

Soap Products, Ltd., granted a charter of incorporation by the State of New York, on August 12th, has recently been reorganized under the National Bankruptcy Act. The Company's affairs are now under the management of the following: chairman of the board, John T. Manson, New Haven, Conn.; president and general manager, L. E. Swinebroad; secretary and treasurer, L. H. Arnett. Department heads have been appointed as follows: sales manager, W. A. Root; plant superintendent and chemist, H. H. Hubble. Mathias Riester, 75 West St., New York, has been named purchasing agent and import and export manager.

The company owns all domestic and foreign patents covering the "Latherizer," a device that has been on the market since 1925, and sold extensively to barbers and beauticians.

The registered trade marks "Latherizer" and "Actoglan" are also owned by the company, under which name twenty-five high grade cosmetics will be offered for sale to professional barbers and beauticians. The plant and laboratory is located at 15 Laight Street, and executive offices at 17 East 42nd Street, New York.

◆

Offer R-P Supplement

A new amendment to the Clayton Act will be presented by Representative Wright Patman at the coming session of Congress, according to current reports in Washington, which will further tighten the bonds on interstate commerce. The bill as now drawn would prohibit all retail sales by manufacturers or their affiliates of their own products. Under its terms manufacturers would not be able to transport in interstate commerce "any article or material produced by such manufacturer for sale or distribution at retail by such manufacturer."

◆

Colgate Special Offer

A special introductory offer on "Cashmere Bouquet" lotion is being made by Colgate-Palmolive-Peet Co. in combination with "Cashmere Bouquet" toilet soap. The two items packed together will be sold at a special price of 39c as compared with 60c if bought separately.

◆

New Oil Company

Sunola Trading Corp., Produce Exchange Bldg., New York, was organized several weeks ago to handle oils used by soap and food manufacturers. S. J. Weinstein, president of Metropolitan Vegetable Oil Co., New York, heads the new concern, while M. S. Lehman, formerly with Agash Refining Corp., Brooklyn, is secretary-treasurer. Imported as well as domestic oils are to be sold, the new firm acting both as principal and broker.

◆

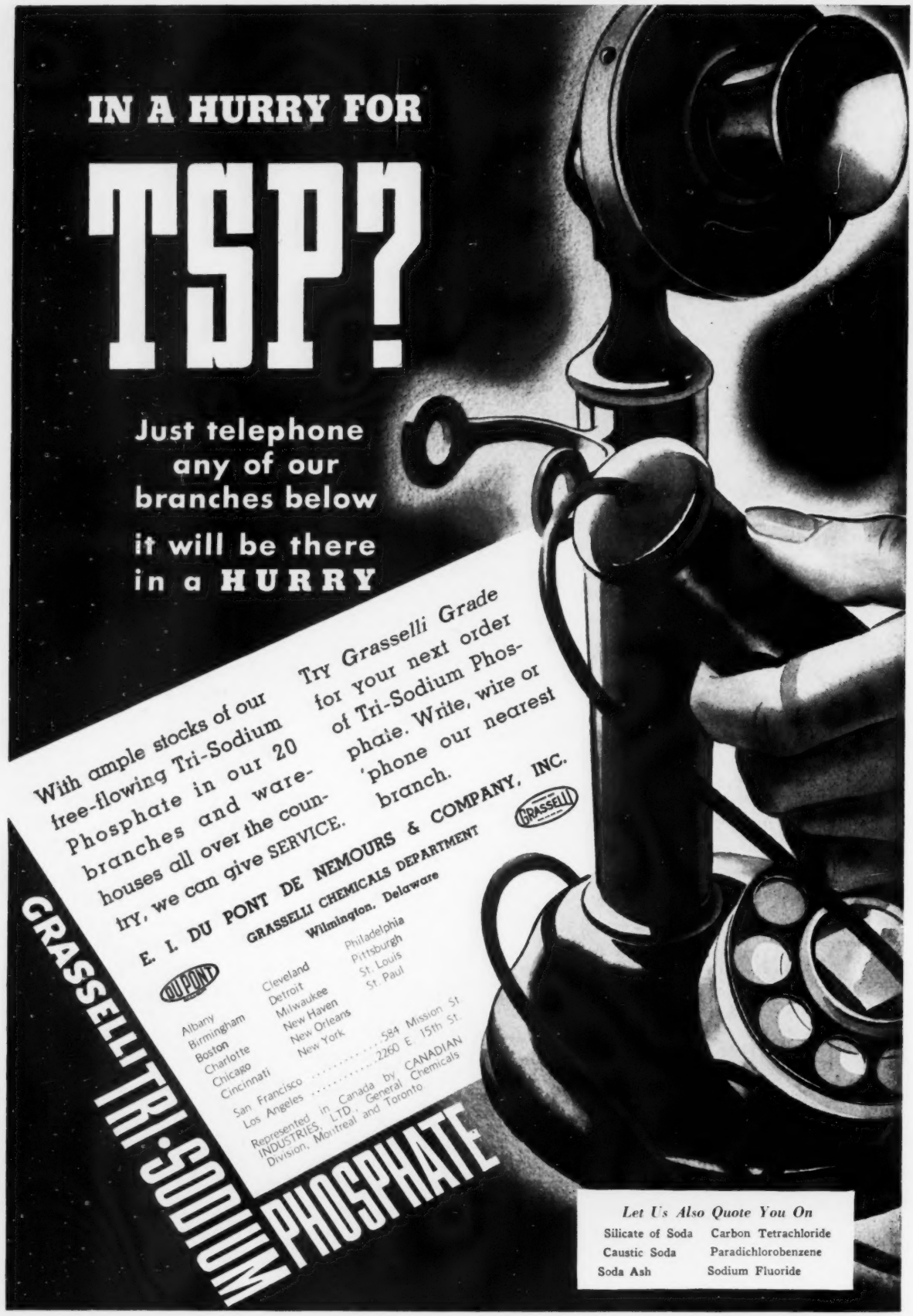
Oil Extraction in Costa Rica

The Government of Costa Rica is at present conducting investigations preliminary to the establishment of an experimental plant for the extraction of tropical vegetable oils, particularly peanut, coconut, palm kernel, sesame, sunflower and castor oils. Fabrica Nacional de Licores, San Jose, Costa Rica, is in charge of the preliminary studies.

◆

Soap Firm Moves

Jiggs Hand Soap Co., Chicago, Ill., has moved from 1720 W. Diversey Parkway to 2949 Lincoln Ave.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Chicago Perfumers Meet

George A. Wrisley, presided at the first fall meeting of the Chicago Perfumery, Soap and Extract Association on September 29th. The regular routine of business was followed and all committee chairmen reported on their activities during the summer when no luncheon meetings were held. Of particular interest to the members attending was the report of J. H. Helfrich, head of the legislative committee, and a talk by the association's attorney, John S. Hall. It has been decided to hold the annual dinner dance at the Knickerbocker Hotel, December 10th and plans for an outstanding party are well under way.

New Plant for Colgate

Work has been started on a new $300,000 plant for Colgate-Palmolive-Peet Co. at Jeffersonville, Ind. Two old buildings, former units of the Indiana State Reformatory, originally purchased by Colgate for use as part of its Jeffersonville plant, will be razed to provide space for the new construction. J. D. Jennings, Louisville contractor, is building the new plant which will be five stories, 90x200 feet, of reinforced concrete construction. Windows will be extended from column to column, giving maximum light and ventilation. It is estimated that $200,000 will be spent on the new building and an additional $100,000 for equipment. H. N. Crooker, superintendent of the plant, advises that work will probably be completed in the spring of 1937.

Alden B. Swift Dies

Alden B. Swift, vice-president and director of Swift & Co., Chicago, died Oct. 13 in Passavant Hospital, Chicago. Mr. Swift, a grandson of the founder of Swift & Co., was fifty years old at the time of his death.

Snell Baltimore Branch

Foster D. Snell, Inc. announce the opening of a Baltimore branch at 215 N. Calvert Street, Baltimore. The new branch will be under the direction of Theodore M. Miller who, because of residence in Baltimore, is familiar with business conditions and methods there. He has been employed for some time in the Brooklyn laboratories of Foster D. Snell, Inc. The new laboratory is equipped to carry on work of the same quality as the parent organization and will keep closely in touch with the home office.

10th ANNUAL MEETING
American Association of Soap and Glycerine Producers

DECEMBER 3

New York City

Plan your trip to be in New York that day.

Plans Sales Campaign

Pierre Amouroux, Inc., New York, cosmetics and perfumes, has appointed United States Advertising Corp., N. Y., to handle its advertising account. Bienaime and Molinard perfumes, the Marcel Rochas line of cosmetics, and Rasoline shaving cream are being featured in a national advertising campaign.

Perkin Medal Award

Dr. Thomas Midgley, Jr. has been elected to receive the Perkin Medal of the Society of Chemical Industry for 1937. The medal is awarded annually for valuable work in applied chemistry and will be presented at a meeting at the Chemists Club, New York, January 8.

Bialeckes Back From Europe

Mr. and Mrs. Adam A. Bialecke have arrived in Chicago from an extended European trip which included visits to most of the important essential oil producing areas of the continent. Mr. Bialecke is connected with the Armour Soap Works.

Soap Standardization Meeting

The soap and detergent committee of the American Society for Testing Materials, headed by Harry P. Trevithick of the New York Produce Exchange, will meet December 3 at the Hotel New Yorker, New York. Work is now in process by various groups on their special problems and progress reports will be made at the coming meeting. All those interested in any aspect of soap and detergent standardization are invited to be present at the December meeting to make their views known.

Check Import Claim

Castilian Products Corp., Hollywood, Calif., has signed a stipulation with the U. S. Federal Trade Commission agreeing that in selling soap it will stop employing the words "Imported Olive Oil" as a brand to designate its products which are not composed wholly of imported olive oil; and the word "Olive", alone or in conjunction with the words "Imported" and "Oil" so as to imply that the fatty content of the soap is composed wholly of olive oil, when such is not a fact. The corporation also will cease using the word "Importers" in any manner that might lead purchasers to believe that it is an importer, when this is not true.

Buys Omaha Quarters

Thompson-Hayward Chemical Co., Kansas City, Mo., has acquired the five-story building housing its branch office at Omaha, Nebraska, 4th and Pierce Street. This property is 60x120 feet and affords plenty of space for storage, office and other facilities. Remodeling the interior is still under way. H. D. Warren is manager of the Omaha office.

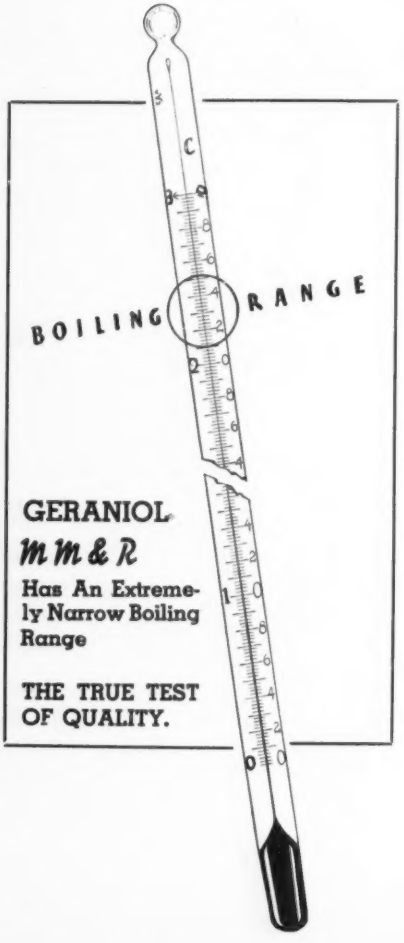
Cosmeticians Meet in Chicago

The Hotel Sherman, Chicago, was the scene on October 4-7 of the seventeenth annual convention of the American Cosmeticians Association. All business sessions as well as the trade show held in conjunction with the meeting were very well attended.

GERANIOL *M M & R*

(A SUPERIOR PRODUCT NOT TO BE COMPARED WITH "GERANIOL FOR SOAP")

Available at an Advantageous Price



Geraniol M M & R is not the ordinary Geraniol, but an isolate of highest quality and purity which contains 90% of acetylizable material calculated as Geraniol.

It is absolutely colorless, does not contain any added floral aromatics of any kind and will not discolor soap. Geraniol M M & R is an ideal basic material for soap perfume oil compounds.

We can offer it now at a price comparable to Geraniols of vastly inferior quality. M M & R chemists wlil be glad to furnish you with complete details.

Prices on request.

MAGNUS, MABEE & REYNARD, INC.

QUALITY ESSENTIAL OIL , BALSAMS AROMATIC CHEMICALS, ETC...SINCE 1895

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Excise Tax Suits Before U. S. Courts

DECISION is expected soon from the U. S. Supreme Court as to whether it will bring before it the various cases involving the constitutionality of the excise tax on first processing of imported oils. Both Haskins Bros. and Iowa Soap Co. have petitions before the Supreme Court requesting writs of certiorari to review the decrees of the U. S. Circuit Court of Appeals for the Eighth Circuit. The decrees in question reversed decisions of and instructed the lower courts which originally ruled on the cases to dissolve preliminary injunctions restraining local collectors of internal revenue from collecting the processing tax on Philippine coconut oil.

Application for these writs of certiorari has not been opposed by the U. S. Department of Justice. This in effect puts the department in the position of joining with the appellants in asking the Supreme Court to bring the tax suits before it for final adjudication and determination of the constitutionality of the legislation under which the taxes were levied. Early action by the court is anticipated.

Supplementing their action for a writ of certiorari in the suit, Haskins Bros. have petitioned the Supreme Court for an order granting a preliminary injunction to preserve the status quo of the subject matter of the suit. Their purpose is to restrain treasury officials, pending final determination of the suit, from certifying and allowing the claim of the Government of the Philippine Islands for all or any part of the moneys received from the tax on Philippine coconut oil.

Another recent development in the long list of legal actions, designed to test various angles of the excise tax law, is a suit just filed by Armour & Co. in the Federal District Court at Chicago for refund of taxes paid on various oils. The question at issue is said to be whether or not the Commissioner of Internal Revenue has correctly interpreted the law as to what constitutes first domestic processing of the oils on which the tax was paid. The suit does not question the constitutionality of the act.

The complaint alleges that at the time Section 602½ of the Revenue Act of 1934 became effective the plaintiff had on hand in its soap works various products which had been made or derived, in part, from coconut oil, palm oil, or sunflower oil. After describing its methods of processing the taxable oils, the plaintiff alleges—

"That the Commissioner of Internal Revenue held that the process of soap-making is a continuous one and that, (a) the washing by plaintiff after the effective date of said Act of killed soap stock made by the boiled process from any one of the taxable oil is prior to the effective date of said Act, (b) the further washing after the effective date of said Act of kettle soap which had been made from one of the taxable oils prior to the effective date of said Act and which was in process of being washed at said date, and (c) the addition after the effective date of said Act of an alkaline filler to settled soap which had been made from any one of the taxable oils prior to said date constituted steps in the process of soap-making; that the Commissioner accordingly ruled that either of the said acts done by the plaintiff after the effective date of the Act constituted a processing of one of the taxable oils, or a combination or mixture containing a substantial quantity thereof.

"That the Commissioner of Internal Revenue held that since in the cold or semi-boiled process of soap-making glycerin is not removed, whereas, in the boiled process, the glycerin is removed, scrap soap made by the cold or semi-boiled process, although not containing any oil as such, does contain all the original components of the oil and is, therefore, a combination or mixture containing oil, and further ruled that, the reworking after the effective date of the Act of scraps or fragments of soap made prior to the enactment of said Act from any of the taxable oils by the cold or semi-boiled process constituted a taxable first domestic processing of the particular taxable oil, whereas a similar reworking after the effective date of scraps or fragments of soap made prior to the effective date by the boiled process from a taxable oil was not a taxable first domestic processing of the particular taxable oil.

"That the Commissioner of Internal Revenue held that the working or use of raw coconut oil foots and acidulated coconut oil foots after the effective date of the Act constituted a taxable processing of coconut oil, or a combination containing a substantial quantity of coconut oil if such products contain 10 per cent or more, by weight, of coconut oil.

"That the aforesaid rulings and determinations of the Commissioner of Internal Revenue are erroneous and constitute an unwarranted and illegal attempt to broaden the scope of said Act beyond the express terms thereof so as to impose the tax upon products processed from oil by plaintiff prior to the effective date of the Act and held by the plaintiff on such date; that none of the aforesaid acts and things done by plaintiff to the aforesaid products constituted a taxable first domestic processing of oil or of a combination or mixture of oil for the following reasons:

"*First*: That after saponification of oil has been completed, the resultant product is no longer oil and does not contain oil except per-

PREPARED FROM THE FINEST MATERIALS AND ENTIRELY FREE FROM ADULTERANTS

PRICE'S *triple pressed* STEARIC ACID is used by leading manufacturers of the finest toilet preparations, shaving creams and toilet soaps.

Of guaranteed English manufacture, it is highly crystalline and white in color.

Melting point is 130°-133° Fahrenheit.

World famous for its unvarying uniformity in quality.

Packed in slabs of about one inch thickness in double burlap bags with a third protective inner bag forming a muslin liner.

Quotations for carloads c less upon application to exclusive American Representatives:

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Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
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Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

MANUFACTURED BY PRICE'S OF LONDON, ENGLAND

haps a negligible quantity; that such product is both chemically and commercially soap; that the killed soap stock, the kettle soap in process of washing, the settled soap, and the soap scraps which plaintiff had on hand on the effective date of said Act were products resulting from the complete saponification of oil and, hence, were soap and were not oil and did not contain a substantial quantity of oil; that the oil from which such products were made had been processed, i. e., used in the manufacture of an article intended for sale, prior to the effective date of said Act.

"*Second*: That neither the raw coconut oil foots nor the acidulated coconut oil foots which the plaintiff had on hand on the effective date of said Act were one of the taxable oils, or a combination or mixture containing a substantial quantity of any of such oils and the Commissioner of Internal Revenue misconstrued and misapplied the act in holding that 10 per centum, by weight, of a combination or mixture is a substantial quantity of such combination and mixture.

"*Third*: If any such products should be held to be a combination or mixture containing a substantial quantity of any one or more of the taxable oils, nevertheless, nothing done to such products after the effective date of the Act was a taxable first domestic processing in that the oil or oils had already been subjected to a first domestic processing and the Act specifically exempts from the tax any combination or mixture containing an oil with respect to which there has been a previous first domestic processing."

Market Esquire Shave Abroad

J. B. Williams Co., Glastonbury, Conn., is introducing its "Esquire" brushless shave on the British market. Sales agents are Scott & Bowne, Ltd.

Peiffer Independent Broker

P. Peiffer, New York, has resigned as vice president of Snow & Cleaver, New York, and has just opened a new office at 15 William St., New York, to represent European oil and fat dealers in United States. Mr. Peiffer was connected with the raw material department of Armour Soap Works for a number of years, prior to joining Snow & Cleaver.

SPECIALTY TOILET SOAPS

Cosmetic soaps, germicidal soaps, vitamin soaps, and other specialty items in the realm of toilet soaps,—their composition, value, and the claims of the makers, their possibilities marketwise,—a discussion to be published soon in SOAP based on experience in the English market by Joseph M. Valence under the title "Specialty Toilet Soaps."

Return To Large Bar

Haskins Bros. & Co., Omaha, have put their widely known one-pound bar of "Blue Barrel" soap back on the market again, with great success. W. J. Cooper, of the Haskins concern advises that sales have increased during the short time they have had the full one-pound bar back on the market. "We featured this one-pound bar for years" he said, "but were talked into cutting it down to the regular 5 cent size for a time. Since we returned to our regular large size bar we know we were right in the first place. Our increase in business proves that." Mr. Cooper explained that they changed the size of the bar early this spring and with increased advertising of the fact, their business showed a marked increase.

Addresses Chicago Club

Frank D. O'Sullivan, Chicago author and publisher, was the guest speaker at the October 29th meeting of the Chicago Drug and Chemical Association. Mr. O'Sullivan's subject, "The Poison Pen of Consumers Research," gave the members some very interesting information regarding the activities of this much publicized organization. December 22nd has tentatively been selected as the date for the association's annual Christmas Party.

C-P-P To Build in Toronto

Colgate - Palmolive - Peet Co., Ltd., has announced plans for construction of an addition to its plant at 64 Natalie Street, Toronto. This addition, work on which will be started immediately, is to be constructed of reinforced concrete. It will contain six stories, above ground and one below, and will increase floor space by 50 per cent. At present the company utilizes several storage warehouses and the added floor space will allow for additional manufacturing and storage facilities as well as more up-to-date dressing room and showers, etc., for employees. The present cafeteria will also be enlarged. Air conditioning has been installed in the offices and waiting rooms during the past year and employees are now working on a five-day week. The cost of the addition and alterations to present building call for an expenditure of approximately $200,000 during the next year.

Oil Prices Rise Further

The oils and fats price index, as compiled by the Bureau of Raw Materials for American Vegetable Oils and Fats Industries, increased from 108.1 in August to 110.7 in September. This index was 111.2 in September of 1935. The index numbers of the various oils and fats for the months of August, 1936 and September, 1936, are as follows:

	Sept. 1936	Aug. 1936
Corn oil	155.0	153.7
Cottonseed oil	154.3	155.3
Coconut oil *	62.5	51.4
Grease	101.8	89.6
Olive oil	185.9	157.1
Olive oil foots	131.5	128.2
Palm oil *	65.5	58.9
Palm kernel oil*	54.7	53.7
Tallow	96.7	87.7
Whale oil	104.9	104.2

* Tax not included.

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PIONEERED FOR NEARLY 50 YEARS
CAUSTIC SODA
HIGHEST GRADE
(ELECTROLYTIC)
IN EITHER
FLAKE, SOLID OR LIQUID FORM
CARBON TETRACHLORIDE
REDISTILLED WATER-WHITE
SUPPLIED ALSO IN COMBINATION WITH OTHER SOLVENTS TO MEET INDIVIDUAL REQUIREMENTS
EARLIEST PRODUCTION IN THIS COUNTRY
TRI-SODIUM PHOSPHATE
FIRST PRODUCER OF A FREE-FLOWING AND NON-CAKING PRODUCT NATIONALLY KNOWN FOR ITS UNIFORM QUALITY
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DIVISION OF WESTVACO CHLORINE PRODUCTS.

Argue Eavenson Appeal

The appeal of J. Eavenson & Sons, Camden, N. J. from a judgment previously handed down against them in the Lever "health soap" case was scheduled to be heard before the appellate division of the Supreme Court of the State of New York, October 27. The original judgment against Eavenson was handed down by Judge Julius Miller in the Supreme Court of New York County just a year ago.

At that time an injunction was issued restraining J. Eavenson & Sons and R. C. Williams & Co., New York wholesale grocers, from manufacturing or selling a soap, carbolic in odor or octagonal in shape which is of red, reddish, or coral color. The Lever suit was for unfair competition, alleging that the defendants were making and selling an imitation of "Lifebuoy" soap. The decision, which also banned the defendants from using the designation, "health soap," stated that the conclusion was inescapable that Eavenson intentionally imitated "Lifebuoy".

It is expected that the decision of the judge in the appeal case will be announced in the early part of December.

Soap Firm at New Address

Jansen Soap & Chemical Co., liquid and hand soaps and sanitary products, has moved into new quarters at 1148 Buchanan St., San Francisco, from 324 Leavenworth St.

Expand "Old Dutch" Broadcast

The Cudahy Packing Company radio program for "Old Dutch Cleanser" will be expanded to a group of network stations Sept. 28. The program, "Batchelor's Children," has been broadcast locally in the Chicago district over station WGN for a year.

New P. & S. Ad Manager

Stanley Whiteway, formerly on the staffs of the *Washington Herald* and *Washington Post*, is in charge of the reorganized advertising department of Proctor & Schwartz, Inc., Philadelphia manufacturers of drying machinery. C. W. Rusk, for many years connected with that company, continues in his capacity of assistant.

Other Oil Representatives

We are advised by Pacific Vegetable Oil Corp., San Francisco, that other representatives in addition to Thompson Hayward Chemical Co. in Dallas and Kansas City; George E. Moser & Son, Detroit; Marshall Dill, Los Angeles; and L. H. Butcher Co., Portland, Ore. and Seattle, Wash., as announced in the October issue of *Soap*, include D. H. Litter Co., in Philadelphia, New York, and Boston; and White & Co., Cleveland and Akron.

"Gre-Solvent" Ad Change

Utility Co., New York, manufacturers of "Gre-Solvent" hand cleanser, has just turned its advertising account over to W. I. Tracy, Inc., New York.

Conti Campaign

A national sales campaign is now being planned by Conti Products Corp., New York, for the line of Erasmic Co., Ltd., London, for which it is United States agent. The products, which are said to be used extensively on the "Queen Mary," include lavender soap, lavender shaving cream, and lavender shaving soap.

American Can Changes

D. W. Figgis has been named vice-president in charge of general line sales by American Can Co. H. G. Edwards, formerly general manager of sales, has been appointed assistant to Dr. H. A. Baker, newly elected president of the company.

Cotton Oil Stocks

Stocks of refined cottonseed oil on hand in United States as of Sept. 30, 1936, totaled 228,763,619 lbs., as compared with 286,331,243 lbs. on the same date in 1935. Stocks of crude cotton oil were 92,666,965 lbs. on Sept. 30, 1936, as compared with 73,918,144 lbs. Sept. 30, 1935.

"Mintsodent" Allowed

Registration of "Mintsodent" as a trademark for use on tooth paste and mouth wash has been allowed Guy C. Buxton, Chicago, by the U. S. Patent Office, despite the opposition filed by the Pepsodent Co., Chicago. Pepsodent held that the Buxton mark would be confusingly similar to theirs. Pepsodent appealed after the examiner of trademark interferences had dismissed the opposition.

F.T.C. Agreement

Levin Brothers, New York, have entered into an agreement with the Federal Trade Commission to discontinue marking their two brands of shaving cream, "Elgin" and "Stetson," with prices in excess of those for which they are sold or are intended to be sold. They have also agreed to stop using the word "laboratories" on the cartons to create the false impression that they manufacture the cream or operate a plant in which the products are made.

Lindsey Co. Sold

H. C. Lindsey Co., Cincinnati, makers of "Washing Gas," scrubbing preparation, was purchased several weeks ago by W. H. Chapman & Sons Co., Wheeling, W. Va. The Lindsey trade mark will still be used and the same type of material will be manufactured by the new firm. The entire plant has been moved to Wheeling.

Ask Higher Soap Freights

Increased freight rates on a number of commodities including soaps, cleaning compounds and various soap raw materials are being sought by American railroads in a proposal placed before representatives of shippers in Washington, D. C., October 1. The railroads are seeking the approval of the National Industrial Traffic League for the new rates in advance of filing in an attempt to add to revenues. The tariffs carrying the changes, if and when filed, will be subject to protest and suspension by the Commis-

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YOU FURNISH THE SOAP ... WE FURNISH THE PERFUME

• BLUE LILAC

"Adds Nature's Blossom Fragrance To Soap"

$4.00 per pound
.35 Trial Ounce
Sample on request

- DESERVES YOUR CONSIDERATION
- WELL BALANCED—WELL FIXED
- BACKED BY "CEFCO" LABORATORY TESTS.

NUMEROUS OTHER STANDARD ODORS. SPECIAL TYPES CREATED.

CHARLES FISCHBECK CO·INC· NEW YORK

119 WEST 19th STREET
"Backed by a Quarter of a Century of Experience"

KRANICH SOAPS

U. S. P.

POWDERED CASTILE SOAP

Powdered Palm — Powdered Coconut Oil Soap — Powdered Coco-Castile

ALSO a complete line of KRANICH QUALITY

Pine Scrub Soaps
Auto Soaps
Shampoo Bases
U. S. P. Potash Soaps

KRANICH SOAP COMPANY

56 Richards Street — Brooklyn, N. Y.

sion. Among proposals included are the following:

Soap; Soap Powders; Compounds, Cleaning, Scouring or Washing; Lye, concentrated.—

Commodity rates to be generally increased 10 per cent.

In the absence of commodity rates, where so-called "Column Rates" apply, the proposals are as follows:

Territorial Application

	Present Per Cent Of First Class	Proposed Per Cent Of First Class
Central Freight Ass'n	32	30
Eastern Trunk Line Ass'n	27½	30
New England Freight Ass'n	27½	30
Official, including Zone "C"	32	30
Western Trunk Line	24½	27½
Southwestern Freight Bureau	24½	27½
Southern Territory	27	30
Official to Northwest	35	35
Northwest to Official	35	35
Official to Western Trunk Line	24½	27½
Western Trunk Line to Official	35	35
Official to Southwestern	24½	27½
Southwestern to Official	24½	27½
Official to Southern	27	30
Southern to Official	30	30
Southwestern to Southern	35	35
Southern to Southwestern	35	35
Western Trunk Line to Southwestern	24½	27½
Southwestern to Western Trunk Line	24½	27½

Argentine Soap Standards

By a decree which will go into effect January 1, 1937, Argentina has established definite standards for the composition and labeling of soaps and soap products. Showing net weight on the label is one of the things made imperative by the new ruling.

"Super Suds" Premium Offer

Safeway Stores, Inc., San Francisco, has been offering the San Francisco trade a Cannon dish towel for three tops from ten-cent packages of C-P-P's "Super Suds" or two tops from twenty-cent packages.

Cosmetic Firm Moves

Produits Nina, Inc., cosmetic manufacturers, 580 Fifth Ave., New York, have recently leased space in La Maison Francaise, Rockefeller Center for their main New York office.

Contracts Awarded

Brooklyn Soap Awards

Kirkman & Son, Brooklyn, have just been awarded a contract for 600,000 lbs. laundry soap at a price of 3.24c for the Brooklyn Quartermaster. Another Brooklyn award, for 48,750 lbs. grit soap, was made to Day & Frick at a price of 3.3c.

Insecticide Bids

At a recent bidding opened by the National Park Service of the Dept. of the Interior, Washington, D. C., the low bidder on 500 gallons insecticide was R. M. Hollingshead Corp., Camden, N. J. who offered a price of $223.

Janitors' Supplies Awards

At a recent bidding opened by the Ft. Sam Houston, Texas Quartermaster, the following awards for janitors' supplies were made: San Antonio Broom Factory, San Antonio, 12,600 brooms at 40.75c; Palmetto Brush & Whisk Co., Jacksonville, Fla., 15,750 scrub brushes, at 12.98c; and Wilkerson Sales Co., Kansas City, 11,436 cotton mops, at 20.5c.

Polish Award

Jos. Dixon Crucible Co., Jersey City, has just been awarded a contract for 12,000 cakes stove polish at a price 4.3c by the Ft. Sam Houston Quartermaster.

Caustic Soda Award

Buckeye Soda Co., Painsville, Ohio, has just been awarded a contract by the Ft. Sam Houston, Texas, Quartermaster, for 31,014 cans caustic soda at a price of 4.41c.

Soap Award

Colgate - Palmolive - Peet Co., Jersey City, has been awarded a contract for 18,195 bars soap by the Ft. Sam Houston Quartermaster, at a price of 3.4c.

Memphis Soap Award

At a recent bidding opened by the Memphis Engineer for soap, soap powder, etc. a low bid of $1,899.78, made by Oliver Finnie Co., Memphis, was accepted.

Laundry Soap Bids

The low bidder in a recent bidding opened by the Procurement Division of the Treasury Dept. for 135,000 cakes laundry soap, was Swift & Co., Washington, at 3.73c.

Mop Bids

The Exchange of the Brooklyn A. I. C. P. was the low bidder recently at a bidding opened by the Procurement Division of the Treasury Dept. for 354 doz. cotton mops. The low price was $2.70 per dozen.

Naphthalene Award

H. H. Rosenthal Co., New York, has just been awarded a contract for 125,000 lbs. naphthalene for the Brooklyn Quartermaster at a price of 6.62c.

Saddle Soap Award

Crystal Soap & Chemical Co., Philadelphia, has just been awarded a contract for 20,000 lbs. saddle soap by the Brooklyn Quartermaster at a price of 8.64c.

Shipkoff on U. S. Visit

Peter Shipkoff, head of P. K. Shipkoff & Co., Kazanlik, Bulgaria, otto of rose distillers, sailed for Europe on the S. S. *Georgic*, October 3, after a short visit in the United States. While in New York he made his headquarters at the office of Compagnie Parento, Inc., his representatives in United States and Canada.

Oil Concern Moves

C. W. Haynes Laboratory, textile oils, has moved from West Springfield, Mass. to Chandler St., Springfield, Mass.

Efficient and clean

Liquids—light or heavy—flow freely from this Por-Spout, and the stream can be accurately controlled. The Hinged Spring Dust Cover flips back, completely exposing the entire spout for FULL POURING VISIBILITY. It snaps back in closed position fully covering the spout and keeping it clean. The Swivel Spout turns back into the proper recess in the cover when not in use—out of the way for stacking and handling.

Ideal for Liquid Soaps, Shampoo Bases, and Insecticides.

Your customers will like this handy, practical Por-Pail. Put it on your Sales Staff now.

Request sample and prices of the efficient SWIVEL-SPOUT POR-PAIL with Hinged Spring Dust Cover—no obligation to you.

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the editor of a prominent London business publication in the drug and chemical field has this to say about the technical information in SOAP:

"I must say that I find your journal the most informative of all the technical journals we receive here from America. So many of the technical journals published in this country and in yours are just so much padding, but with your journal as soon as it comes into my office it is cut into about a dozen different parts and filed under various headings for future reference. With most other journals, one is fortunate if one gets a useful article or piece of information per issue."

●

Other Features

1. **Complete news of the industry interestingly and concisely reported.**
2. **Up-to-the-minute market information on all raw materials used by soap and sanitary products manufacturers.**
3. **Complete record of new trade marks and patents in every issue.**
4. **Marketing, packaging and sales feature articles in every issue written by the industry's experts.**

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SOAP, 254 W. 31st STREET N. Y. C.

Subscription: Three Dollars Annually in the U. S. A.

Foreign, $4.00

New Trade Marks

The following trade-marks were published in the Oct. issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

NATUREL—This in solid letters with sketch of shoe, describing shoe cleaners. Filed by Natural Mfg. Co., Brooklyn, Oct. 17, 1935. Claims use since May 1, 1935.

INDUSTROSOL—This in letters describing textile soap, laundry soap, etc. Filed by Industrial Soap Works, Kearny, N. J., June 23, 1936. Claims use since Jan., 1935.

SUPERKILL—This in solid letters with sketch of hand holding hammer, describing insecticide and disinfectants. Filed by Taylor Chemical Co., Aberdeen, N. C., July 18, 1935. Claims use since Jan., 1935.

FRANKLIN'S GREEN LABEL PRODUCTS—First word in script, rest in solid letters, across a disc, describing insecticides and disinfectants. Filed by Hammond Exterminating Co., Hammond, Ind., June 22, 1936. Claims use since Feb. 4, 1935.

CEE-PEE—This in solid script describing insecticides. Filed by Chemical Products Co., Kansas City, July 11, 1936. Claims use since Dec. 22, 1928.

SURPRISE POLISH—This in solid letters describing furniture polish. Filed by Surprise Polish Co., New York, July 24, 1936. Claims use since June, 1934.

SOAPRITE—This in solid letters, describing machine for making soap suds. Filed by Rudolph Guth, Inc., Cleveland, June 27, 1936. Claims use since Feb. 5, 1936.

FALBALAS—This in solid letters describing soap. Filed by Lucien Lelong, Inc., Chicago, June 3, 1936. Claims use since Nov. 13, 1935.

STAKILD—This in solid letters describing insecticides. Filed by S. S. Stafford, Inc., New York, June 22, 1936. Claims use since Feb. 1, 1936.

VEGET-AID—This in solid letters describing insecticides. Filed by General Chemical Co., New York, July 1, 1936. Claims use since June 3, 1936.

GLOVER'S ZERO-SECT—This in solid letters with sketch of mosquito describing insect repellent. Filed by Frank P. Glover, Washington, D. C., July 29, 1936. Claims use since July 2, 1934.

GLEEM-O—This in solid letters describing tooth powder. Filed by Rudolph Moosbrugger, Glenside, Pa., Aug. 6, 1936. Claims use since Jan. 11, 1934.

SEPTO SHINE—This in solid letters within sunburst design on rectangle, describing metal polish. Filed by Septo Products Co., Detroit, May 23, 1936. Claims use since Apr. 22, 1936.

ASEPTISIL — This in broken letters describing antiseptic detergents. Filed by Pennsylvania Salt Mfg. Co., Philadelphia, July 2, 1936. Claims use since June 23, 1936.

BALAB—This in solid lower case letters describing automobile cleaner. Filed by Balab, Ltd., San Francisco, July 3, 1936. Claims use since Aug. 24, 1935.

LOROLAV—This in solid letrs. with the word "Lorolav" beneath a diamond, describing soap. Filed by Bostonia Products Co., Boston, Aug. 7, 1936. Claims use since July 31, 1935.

KIRPO—This in solid letters describing soap powder. Filed by Kirkman & Son, Inc., Brooklyn, Aug. 8, 1936. Claims use since November, 1935.

KIRMA—This in solid letters describing soap and soap chips. Filed by Kirkman & Son, Inc., Brooklyn, Aug. 8, 1936. Claims use since March, 1932.

VIT—This in script oval-shaped reverse plate, describing shampoo. Filed by Vit Inc., Minneapolis, July 11, 1936. Claims use since June 13, 1936.

J-A-M—This in solid letters describing insecticide. Filed by John A. Myers, Philadelphia, July 25, 1936. Claims use since Apr. 8, 1936.

SNO-FLAKE — This in heavy block letters describing leather polish. Filed by Sno-Flake Products Co., Detroit, June 26, 1936. Claims use since April, 1934.

META-KLEEN — This in solid letters describing washing powder. Filed by Riddiford Bros., Inc., Chicago, July 30, 1936. Claims use since November, 1935.

PERFECT SOLVENT — This on reverse plate describing hand soap. Filed by Perfect Polish Co., Brooklyn, Aug. 6, 1936. Claims use since March, 1915.

MOTH-O-RIZE—This in solid letters with center letter enclosed in triangle, describing liquid moth-proofing compound. Filed by Moth-O-Rize Co., Inc., Chicago, Aug. 14, 1936. Claims use since July 6, 1936.

NO-RUB — This on diamond-shaped reverse plate, describing furniture polish and floor wax. The words "No-Rub" are disclaimed apart from the mark shown. Filed by Wilbert Products Co., New York, Dec. 16, 1935. Claims use since October, 1930.

MISTO—This in outline letters describing powdered cleanser. Filed by Grand Union Tea Co., New York, Sept. 16, 1935. Claims use since June 5, 1935.

WHITE-WAVE—This in outline letters with sketch of wave, describing washing fluid. Filed by White Wave Washing Fluid Co., Chicago, Nov. 23, 1935. Claims use since Nov. 20, 1935.

BIG W—This in solid letters with large "W," describing wall paper cleaner. Filed by Kutol Products Co., Cincinnati, July 3, 1936.

RAW MATERIALS for the soap and allied industries

ALCOHOL
AMMONIA
BLEACHING POWDER
BORAX
BICARBONATE OF SODA
CALCIUM CHLORIDE
CARBON TETRACHLORIDE
CAUSTIC SODA
CAUSTIC POTASH
DYES
DISODIUM PHOSPHATE
GLAUBERS SALTS
GLYCERINE
METASILCATE
OXALIC ACID
POTASSIUM CARBONATE
SAL AMMONIAC
SALT
SAL SODA
SILICATE OF SODA
SODA ASH
TRISODIUM PHOSPHATE
CASTOR OIL
COCOANUT OIL
CORN OIL
COTTONSEED OIL
LARD OIL
NEATSFOOT OIL
OLEIC ACID-RED OIL
OLIVE OIL
OLIVE OIL FOOTS
PALM OIL
PALM KERNEL OIL
PEANUT OIL
RAPESEED OIL
ROSIN
SALAD OIL
SOYA BEAN OIL
SESAME OIL
TEASEED OIL
WHITE OLEINE
FATTY ACIDS
STEARINE
STEARIC ACID
GREASE
TALLOW

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No-Trik—This in fancy solid letters describing cleanser. Filed by No-Trik Co., West Allis, Wisc., Aug. 15, 1936. Claims use since July, 1936.

Cosray—This in solid script describing tooth paste and cosmetics. Filed by Los Angeles Soap Co., Los Angeles, Oct. 18, 1935. Claims use since Sept. 27, 1935.

Big Six—This in solid letters describing powdered insecticide. Filed by Stewart and Co., Los Angeles, Aug. 1, 1936. Claims use since June 20, 1936.

Bomex—This in solid letters describing liquid and cake disinfectants and deodorants. Filed by Bomex Products Co., Buffalo, Aug. 13, 1936. Claims use since June 3, 1936.

Deopine—This in solid letters describing deodorant and antiseptic spray. Filed by West Disinfecting Co., Long Island City, N. Y., Aug. 19, 1936. Claims use since July 16, 1936.

Avitex—This in solid letters describing water softener. Filed by E. I. Du Pont de Nemours and Co., Wilmington, Aug. 20, 1936. Claims use since Aug. 3, 1936.

Accent—This in solid letters describing shampoo. Filed by Huntington Laboratories, Inc., Huntington, Ind., Aug. 26, 1936. Claims use since June 5, 1936.

Rid-O-Moth—This in solid letters with sketch of moth, describing moth preventives. Filed by Standard Naphthalene Products Corp., Kearny, N. J., Aug. 26, 1936. Claims use since Apr. 25, 1923.

Poloid—This in solid script across rectangle, describing polish. Filed by J. C. Fulkerson, Butler, Mo., July 18, 1936. Claims use since May 15, 1936.

Zephyr—This in solid letters describing automobile polish. Filed by Goodyear Tire & Rubber Co., Akron, Aug. 26, 1936. Claims use since June 23, 1936.

Trade Marks Granted

338,966. Germicide. Mer-Kil Products Co., Hollywood. Filed April 13, 1936. Serial No. 377,159. Published June 30, 1936. Class 6.

338,968. Insecticide. James B. McComb, New York. Filed April 11, 1936. Serial No. 377,122. Published June 30, 1936. Class 6.

338,975. Insecticides. Service Products Co., Chicago. Filed April 17, 1936. Serial No. 377,323. Published June 30, 1936. Class 6.

338,981. Moth Spray. Insecticide Research Bureau, Chicago. Filed April 20, 1936. Serial No. 377,389. Published June 30, 1936. Class 6.

338,984. Liquid and Wax Polishes. C. J. Ostdiek Mfg. Co., Minneapolis. Filed April 20, 1936. Serial No. 377,413. Published July 14, 1936. Class 16.

338,999. Water Softener. Watson-Park Co., Boston. Filed April 27, 1936. Serial No. 377,728. Published July 14, 1936. Class 6.

339,011. Soaps and Shaving Cream. Houbigant, Inc., New York. Filed May 6, 1936. Serial No. 378,077. Published July 14, 1936. Class 4.

339,032. Dry Cleaning Compound. Union Oil Co. of Calif., Los Angeles. Filed November 5, 1935. Serial No. 371,240. Published July 14, 1936. Class 4.

339,078. Soap. Beach Soap Co., Lawrence, Mass. Filed May 16, 1936. Serial No. 378,517. Published July 14, 1936. Class 4.

339,087. Household Cleanser. Frank Henry Lampe, Los Angeles. Filed March 7, 1936. Serial No. 375,709. Published July 14, 1936. Class 4.

339,112. Disinfectants and Antiseptics. Edvic Importing Co., Brooklyn. Filed April 2, 1936. Serial No. 376,726. Published July 7, 1936. Class 6.

339,211. Insecticides. Chipman Chemical Co., Bound Brook, N. J. Filed January 15, 1936. Serial No. 373,676. Published July 14, 1936. Class 6.

339,350. Soap Chips. Halle Bros. Co., Cleveland. Filed May 8, 1936. Serial No. 378,205. Published July 28, 1936. Class 4.

339,356. Shoe Polish. Gable Laboratories, Jacksonville, Fla. Filed May 12, 1936. Serial No. 378,375. Published July 28, 1936. Class 4.

339,435. Detergents. Cunningham Cleanser Corp., New York. Filed January 2, 1936. Serial No. 373,286. Published July 28, 1936. Class 4.

339,556. Liquid Shampoo. Parker Herbex Corp., New York. Filed April 3, 1936. Serial No. 376,772. Published August 4, 1936. Class 6.

339,582. Wall Paper Cleaner. Kutol Products Co., Inc., Cincinnati. Filed June 1, 1936. Serial No. 379,114. Published August 4, 1936. Class 4.

339,584. Polishes. Humble Oil & Refining Co., Houston, Tex. Filed June 1, 1936. Serial No. 379,093. Published August 4, 1936. Class 4.

339,597. Dentifrice. Ox-Gen Laboratories, Houston, Tex. Filed May 11, 1936. Serial No. 378,301. Published July 28, 1936. Class 6.

339,606. Insect Repellent. Frederick Phillips Case, Munising, Mich. Filed April 13, 1936. Serial No. 377,137. Published August 4, 1936. Class 6.

339,614. Insecticide. Sallade & Co., New York. Filed April 21, 1936. Serial No. 377,481. Published July 28, 1936. Class 6.

339,661. Paint Cleaning Powder. Wickham Co., Riverside, Mich. Filed June 1, 1936. Serial No. 379,159. Published August 4, 1936. Class 4.

339,664. Liquid Fabric Cleaner. Master Foam Laboratories, Dayton, O. Filed June 3, 1936. Serial No. 379,250. Published August 4, 1936. Class 4.

339,702. Shampoos. Chatelle Co., Chicago. Filed February 12, 1934. Serial No. 347,268. Published August 11, 1936. Class 6.

339,710. Hand Cleaner. Insto Co., Los Angeles. Filed June 12, 1936. Serial No. 379,616. Published August 11, 1936. Class 4.

339,723. Floor Wax. Plymouth Wholesale Dry Goods Corp., New York. Filed June 1, 1936. Serial No. 379,136. Published August 4, 1936. Class 16.

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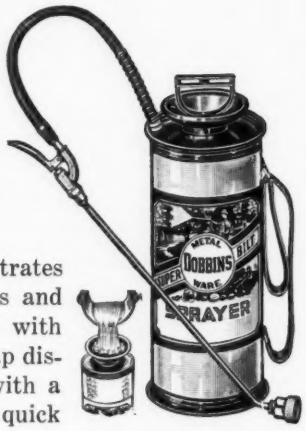

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Raw Material Markets

(As of October 27, 1936)

NEW YORK—A number of factors have been at work this period, influencing the soap raw materials market to a substantial extent. Trading has, in general, been quite conservative, restricted towards the end of the month particularly as a result of the approaching election. Buyers are not anxious to purchase in excess of their actual needs. The market in most materials has remained firm. Coconut oil has shot upward fiercely as a result of the absence of copra on the market. The demand for babassu oil is still absorbing the greater part of the supply. Prices for this material went up one cent this period. Tallow and grease, however, have eased somewhat, but, at closing time, were beginning to recover. The chief development in the essential oil market was the devaluation of a number of European currencies, particularly those in which various aromatic materials are controlled. As a consequence of this development, prices of French oils, such as geranium and lavender, have been reduced. Spanish essential oils are continuing upward, with no new developments in Spain and increasing uncertainty as to future supplies. Trading, as a whole, in the essential oil market was reported to be excellent in volume. The glycerin market held its firm tone, with supply nowhere near demand. Increase in quotations on import offerings added to the tension of the situation.

Coconut Oil

Starting the period with a reduction of 1/8 to 1/4 cent per lb. below last month's closing quotation of 5 3/8 to 6 cents, coconut oil prices suddenly about faced and began an advance to new highs for the year. At closing, Philippine oil was quoted at 7 1/4c, tanks, N. Y., and 6 3/4c, Pacific Coast. This is an increase of about 60 per cent over the level of prices just three months ago—when the market wavered around 4c and 4 1/2c. Prices soared so steadily in recent weeks because of the shortage of copra on the market, although United States crushers do not believe there is a scarcity of copra in the Philippines. The fact that this year Europe took about half the offerings of Philippine copra, whereas ordinarily the United States purchases the major portion and Europe gets her supplies elsewhere, may account for the present situation. Importers and crushers are said to have withdrawn from the market and whatever transactions are put through are being made with resold oil.

Olive Oil

The reaction which was to be expected after olive oil prices advanced by leaps and bounds on account of the scare created by the Spanish civil war has occurred. Although quotations are for the most part nominal since stocks are extremely small, at the close of this period the price was $1.20 per gallon, 40c less than at the end of last month. As far as foots were concerned, prices went up 1/4c, quotations being about 9 1/4c per lb. The foots market was steady all through this period.

Tallow

Despite the firmness of the palm oil market and the increases in the price of coconut oil, the tallow market wavered somewhat this period. At closing, prices were lower than those for last month, special tallow being quoted at 6 5/8c, which is 1/4c less than last month, and city extra at 6 3/4c, 1/2c less than last month. Towards the end of the period, interest picked up and the market began to show a steadier tone. Transactions, however, were limited to unimportant quantities. The futures market also became more active and steadier toward closing.

Anise Oil

The anise oil market was extremely firm all through this period, with spot stocks low and demand good. The prospect for stocks to become normal on spot did not appear promising at any time.

Bergamot Oil

Italy has just announced higher prices on bergamot oil, making the firm tone which has been prevailing in this market even stronger, in spite of new production. Spot quotations at closing were from $2.50 to $3.00, an increase of 15c to 50c over last period.

Geranium Oil

Reflecting lower replacement costs made possible by devaluation, prices of both African and Bourbon geranium oil went down. Closing prices on African oil were $4.50 to $6.50, from 25c to 75c lower than last month. Bourbon prices were 25c to $1.10 lower, being from $4.75 to $5.65 per lb.

Rosemary Oil

With the situation in Spain still unsettled, rosemary prices have continued to rise.

Glycerin

Glycerin prices have continued to advance, with demand considerably exceeding supply. Imports have become heavier, but prices abroad have now reached such high levels that most buyers are said to have withdrawn temporarily. Prices on C. P. and dynamite glycerin have advanced 2c over last period, now standing at 19 1/2c to 21c. An increase of 1 1/2c per lb. has taken place in the case of saponification and 1c on soap lye grades, prices now being 15 1/2 to 16 1/2c and 14 to 15c, respectively.

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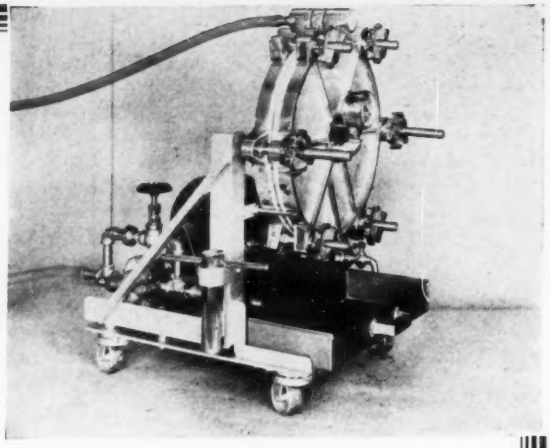

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Raw Material Prices

(As of October 27, 1936)

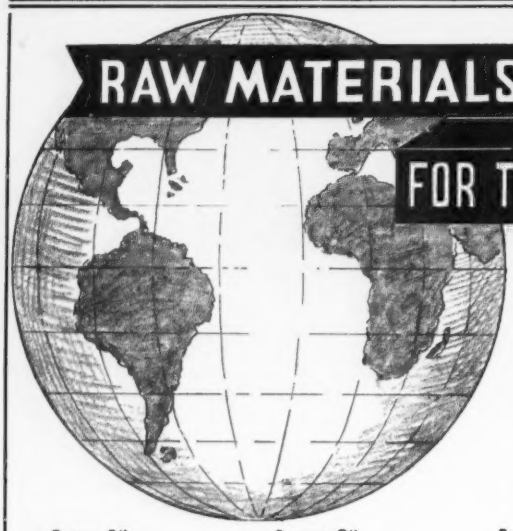
Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums	lb.	$ .11	$ .12½
Acid, Boric, bbls., 99½%	ton	95.00	100.00
Cresylic, drums	gal.	.73	.75
Low boiling grade	gal.	.78	.80
Oxalic, bbls.	lb.	.11½	.12¼
Adeps Lanae, hydrous, bbls.	lb.	.16	.18
Anhydrous, bbls.	lb.	.17	.19
Alcohol, Ethyl, U. S. P., bbls	gal.	4.13	4.25
Complete Denat., SD 1, drums, ex.	gal.	.32	.37
Alum. Potash lump	lb.	.03¼	.03½
Ammonia Water, 26°, drums, wks.	lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls	lb.	.08	.12½
Bentonite 1	ton	—	16.00
Bentonite 2	ton	—	11.00
Bleaching Powder, drums	100 lb.	2.25	2.60
Borax, pd., cryst., bbls., kegs	ton	50.00	55.00
Carbon Tetrachloride, car lots	lb.	—	.05¼
L. C. L.	lb.	.07	.08½
Caustic, see Soda Caustic, Potash Caustic			
China Clay, filler	ton	10.00	25.00
Cresol, U. S. P., drums	lb.	.10	.10½
Creosote Oil	gal.	.12½	.13½
Feldspar (200 to 325 mesh)	ton	14.00	15.00
Formaldehyde, bbls.	lb.	.06	.07
Fullers Earth	ton	15.00	24.00
Glycerine, C. P., drums	lb.	.19½	.21
Dynamite, drums	lb.	.19½	.21
Saponification, drums	lb.	.15½	.16½
Soap lye, drums	lb.	.14	.15
Hexalin, drums	lb.	—	.30
Kieselguhr, bags	ton	—	35.00
Lanolin, see Adeps Lanae.			
Lime, live, bbls.	per bbl.	1.70	2.20
Mercury Bichloride, kegs	lb.	.71	.76
Naphthalene, ref. flakes, bbls.	lb.	.07¼	.07½
Nitrobenzene (Myrbane) drums	lb.	.09	.11
Paradichlorbenzene, bbls., kegs	lb.	.16	.25
Petrolatum, bbls. (as to color)	lb.	.02	.07¼
Phenol, (Carbolic Acid), drums	lb.	.14¼	.16
Pine Oil, bbls	gal.	.59	.64
Potash, Caustic, drums	lb.	.06¼	.06½
Flake	lb.	.07	.07¼
Potassium Carbonate, solid	lb.	.07¼	.09½
Liquid	lb.	.03½	.03¾
Pumice Stone, powder	100 lb.	3.00	4.00
Rosins (600 lb. bbls. gross for net)—			
Grade B to H, basis 280 lbs.	bbl.	7.50	7.50
Grade K to N	bbl.	7.50	7.55
Grade WG and X	bbl.	7.55	8.45
Wood FF Spot	bbl.	6.77	7.80
Rotten Stone, pwd. bbls.	lb.	.02½	.04½
Silica	ton	20.00	27.00
Soap, Mottled	lb.	.04⅛	.04⅝
Olive Castile, bars	lb.	.26	.35
Olive Oil Foot	lb.	.11	.11½
Powdered White, U. S. P.	lb.	.32	.40
Green, U. S. P	lb.	.06½	.08
Tallow Chips, 88%	lb.	.07½	.08
Whale Oil, bbls.	lb.	.05	.06
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.23	1.50
Car lots, in bulk	100 lb.	—	1.05
Soda Caustic, cont., wks., solid	100 lb.	—	$2.60
Flake	100 lb.	—	3.00
Liquid, tanks	100 lb.	—	2.25
Soda Sal., bbls.	100 lb.	1.10	1.30
Sodium Chloride (Salt)	ton	11.40	14.00
Sodium Fluoride, bbls	lb.	.07¼	.08¾
Sodium Hydrosulphite, bbls	lb.	.19	.20
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.35	1.75
Tar Acid Oils, 15-25%	gal.	.21	.24
Trisodium Phosphate, bags, bbls.	lb.	.03	.03½
Zinc Oxide, lead free	lb.	.06	.06¼
Zinc Stearate, bbls	lb.	.20	.22

Oils — Fats — Greases

Babassu, tanks	lb.	—	.09¼
Castor, No. 1, bbls	lb.	.10¾	.11½
No. 3, bbls	lb.	.10¼	.11
Coconut			
Manila, tanks, N. Y.	lb.	.04¼	Nom.
Tank, Pacific coast	lb.	.06¾	Nom.
Cod, Newfoundland, bbls.	gal.	.48½	Nom.
Copra, bulk, coast	lb.	.04	Nom.
Corn, tanks, mills	lb.	.08⅞	Nom.
Cottonseed, crude, tanks, mill	lb.	—	.08½
PSY, futures	lb.	.10	.10¼
Degras, Amer., bbls.	lb.	.05½	.06
English, bbls.	lb.	.06	.06½
Neutral, bbls.	lb.	.08½	.10½
Greases, choice white bbls., N. Y.	lb.	.06¾	.08⅜
Yellow	lb.	.06¼	.06⅜
House	lb.	.06¼	.06⅜
Lard, City	lb.	.11¾	.12
Compound tierces	lb.	.12	.12¼
Lard Oil,			
Extra, bbls.	lb.	—	.10¾
Extra, No. 1, bbls.	lb.	—	.09¾
No. 2, bbls.	lb.	—	.09¼
Linseed, raw, bbls., spot	lb.	.0940	.1000
Tanks, raw	lb.	.0880	.0900
Boiled, 5 bbls. lots	lb.	.1020	.1040
Menhaden, Crude, tanks, Balt	gal.	—	.28
Oleo Oil, No. 1, bbls., N. Y.	lb.	—	.11½
No. 2, bbls., N. Y.	lb.	—	.11
Olive, denatured, bbls., N. Y.	gal.	1.20	Nom.
Foots, bbls., N. Y.	lb.	.09¼	.09⅜
Palm	lb.	.04½	.05⅜
Palm Kernel, casks, denatured	lb.	—	.0545
Peanut, domestic tanks	lb.	.08⅝	Nom.
Red Oil, distilled bbls.	lb.	.10⅛	.11⅝
Saponified bbls.	lb.	.10⅛	.11⅝
Tanks	lb.	—	.09¼
Soya Bean, domestic tanks, N. Y.	lb.	—	.08½
Stearic Acid,			
Double pressed	lb.	.10½	.11
Triple pressed, bgs.	lb.	.13¼	.14¼
Stearine, oleo, bbls.	lb.	.09½	.10
Tallow, special, f.o.b. plant	lb.	—	.06⅝
City, ex. loose, f.o.b. plant	lb.	—	.06¾
Tallow, oils, acidless, tanks, N. Y.	lb.	—	.09¼
Bbls., c/l N. Y.	lb.	—	.09¾
Whale, refined	lb.	.0690	.0710



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Cottonseed Oil	Sesame Oil	Oleo Stearine	Caustic Soda	Tri Sodium Phosphate
Palm Oil	Soya Bean Oil	Stearic Acid	Soda Ash	Di Sodium Phosphate
Palm Kernel Oil	Teaseed Oil	White Olein	Caustic Potash	Chlorphyll
			Carbonate Potash	"CEREPS" Superfatting Agent
			Sal Soda	

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(*As of October 27, 1936*)

Essential Oils

Almond, Bitter, U. S. P.	lb.	$2.00	$2.50
Bitter, F. F. P. A.	lb.	2.25	2.75
Sweet, cans	lb.	.70	.72
Anise, cans U. S. P.	lb.	.85	.88
Bay tins		1.30	1.50
Bergamot, coppers	lb.	2.50	3.00
Artificial	lb.	1.00	1.30
Birch Tar, rect. tins	lb.	.75	.80
Crude, tins	lb.	.14	.17
Bois de Rose, Brazilian	lb.	1.25	1.35
Cayenne	lb.	2.75	3.00
Cade, cans	lb.	.26	.28
Cajeput, native, tins	lb.	.45	.46
Calamus, tins	lb.	2.75	3.00
Camphor, Sassy, drums	lb.	13½	.14
White, drums	lb.	.14½	.15
Cananga, native, tins	lb.	2.25	2.30
Rectified, tins	lb.	3.00	3.35
Caraway Seed	lb.	2.00	2.25
Cassia, Redistilled, U. S. P.	lb.	.95	1.00
Cedar Leaf, tins	lb.	.65	.70
Cedar Wood, light, drums	lb.	.18	.20
Citronella, Java, drums	lb.	.29	.30
Citronella Ceylon, drums	lb.	.22½	.23
Clove, U. S. P., tins	lb.	1.08	1.10
Eucalyptus, Austl., U. S. P., cans	lb.	.35	.36
Fennel, U. S. P., tins	lb.	1.05	1.10
Geranium, African, cans	lb.	4.50	6.50
Bourbon, tins	lb.	4.75	5.65
Hemlock, tins	lb.	1.00	1.05
Lavender, U. S. P., tins	lb.	2.55	7.25
Spike, Spanish, cans	lb.	1.05	1.40
Lemon, Ital., U. S. P.	lb.	1.55	2.25
Lemongrass, native, cans	lb.	.55	.63
Linaloe, Mex., cases	lb.	1.15	1.20
Nutmeg, U. S. P., tins	lb.	1.10	1.15
Orange, Sweet W. Ind., tins	lb.	1.95	2.00
Italian cop	lb.	2.10	3.00
Distilled	lb.	—	.90
Origanum, cans, tech	lb.	.90	1.25
Patchouli	lb.	5.00	6.00
Pennyroyal, dom.	lb.	1.65	1.75
Imported	lb.	1.60	1.85
Peppermint, nat., cans	lb.	2.20	2.45
Redis., U. S. P., cans	lb.	2.35	2.70
Petitgrain, S. A., tins	lb.	1.00	1.15
Pine Needle, Siberian	lb.	.90	1.10
Rose, Natural	oz.	5.25	22.50
Artificial	oz.	2.00	3.00
Rosemary, U. S. P., tins	lb.	.43	.48
Tech., lb. tins	lb.	.37	.38
Sandalwood, E. Ind., U. S. P.	lb.	4.80	5.50
Sassafras, U. S. P.	lb.	.75	1.25
Artificial	lb.	.33	.35
Spearmint, U. S. P.	lb.	1.85	2.00
Thyme, red U. S. P.	lb.	.85	1.25
White, U. S. P.	lb.	.80	1.35
Vetivert, Bourbon	lb.	8.00	18.00
Ylang Ylang, Bourbon	lb.	3.50	6.00

Aromatic Chemicals

Acetophenone, C. P.	lb.	$1.25	$2.25
Amyl Cinnamic Aldehyde	lb.	1.55	2.00
Anethol	lb.	1.05	1.10
Benzaldehyde, tech.	lb.	.60	.65
U. S. P.	lb.	1.20	1.30
Benzyl, Acetate	lb.	.56	1.00
Alcohol	lb.	.65	1.15
Citral	lb.	2.00	2.30
Citronellal	lb.	1.25	1.50
Citronellol	lb.	1.90	2.15
Citronellyl Acetate	lb.	4.50	7.00
Coumarin	lb.	3.10	3.30
Cymene, drums	gal.	.90	1.25
Diphenyl oxide		.70	1.00
Eucalyptol, U. S. P.	lb.	.50	.55
Eugenol, U. S. P.	lb.	2.00	2.50
Geraniol, Domestic	lb.	.75	2.00
Imported	lb.	2.00	3.00
Geranyl Acetate	lb.	2.00	2.50
Heliotropin	lb.	2.00	2.10
Hydroxycitronellal	lb.	3.50	9.00
Indol, C. P.	oz.	2.00	2.50
Ionone	lb.	3.25	5.50
Iso-Eugenol	lb.	3.00	4.25
Linalool	lb.	1.65	2.25
Linalyl Acetate	lb.	1.50	3.25
Menthol	lb.	3.50	3.60
Methyl Acetophenone	lb.	2.50	3.00
Anthranilate	lb.	2.10	2.75
Paracresol	lb.	4.50	6.00
Salicylate, U. S. P.	lb.	.40	.45
Musk Ambrette	lb.	4.20	5.00
Ketone	lb.	4.35	5.25
Xylene	lb.	1.25	2.00
Phenylacetaldehyde	lb.	4.80	8.00
Phenylacetic Acid, 1 lb. bot.	lb.	2.50	3.25
Phenylethyl Alcohol, 1 lb. bot.	lb.	4.00	4.50
Rhodinol	lb.	5.75	8.00
Safrol	lb.	.54	.57
Terpineol, C. P., 1,000 lb. drs.	lb.	.23	.25
Cans	lb.	.27	.30
Terpinyl Acetate, 25 lb. cans	lb.	.80	.90
Thymol, U. S. P.	lb.	1.40	1.50
Vanillin, U. S. P.	lb.	3.75	4.00
Yara Yara	lb.	1.30	2.00

Insecticide Materials

Insect powder, bbls.	lb.	.17	.18
Concentrated Extract			
5 to 1	gal.	1.25	1.30
20 to 1	gal.	4.20	4.40
30 to 1	gal.	6.15	6.45
Derris, powder—4%	lb.	.33	.38
Derris, powder—5%	lb.	.39	.44
Cube, powder—4%	lb.	.23	.28
Cube, powder—5%	lb.	.28	.33

Gums

Arabic, Amb. Sts.	lb.	.09¾	.10
White, powdered	lb.	.13	.14
Karaya, powdered No. 1	lb.	.09½	.10
Tragacanth, Aleppo, No. 1	lb.	1.75	1.80
Sorts	lb.	.30	.31

Waxes

Bees, white	lb.	.36	.38
African, bgs.	lb.	.25½	.26
Refined, yel.	lb.	.28	.30
Candelilla, bgs.	lb.	.16	.17
Carnauba, No. 1	lb.	.46	.47
No. 2, N. C.	lb.	.39	.40
No. 3, chalky	lb.	.34½	.35½
Ceresin yellow	lb.	.36	.38
Paraffin, ref. 125-130	lb.	.04½	.04¾

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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*.

Additions to Toilet Soap Stock

ONE of the most fruitful causes of toilet soap going wrong during milling and plodding is the careless incorporation of added ingredients. Anything of an acid nature will immediately shorten the texture of the soap base and break the grain. The change can be observed by the development of flakes, blisters or fissures in the soap after it leaves the plodder. Phenol and boric acid are two of the chief offenders in this respect. A tough base will be more or less proof against small quantities of these acids, but a "shorter" soap base, or one with a comparatively high salt content, should have further additions made to it to counteract the shortening effect of the acids. The most effective of such protective ingredients are lanolin, petroleum jelly and glycerine. These may be used in quantities varying from 1 to 5 per cent, as a mixture of the three in equal proportions, or any one may be used separately. It is better not to include more than 3 per cent of any one of them.

The most common addition to toilet soap, apart from the perfume, is zinc oxide, used to whiten the soap and to counteract any possibility of transparency. It is also claimed that zinc oxide has the effect of bringing out the perfume. Although titanium dioxide is a better material for these purposes, it is more expensive. Bases with a heavy oil content other than coconut or palm kernel oil usually become leathery during processing, and if at all overheated, develop slight transparency, which is not uniform throughout the soap. This streakiness and waxy appearance is overcome by the addition of 2 to 6 ounces of oxide to a hundredweight of base.

More trouble is experienced with the transparency of colored soaps than with white. This difficulty may develop as the machinery becomes hotter, so that soaps produced later in the day are of a deeper shade than those processed in the morning. In preparing colors, it is to be noted that some dyes need much more water than others for their complete solution. This fact must be taken into consideration when making up bulk dye solutions, for while the powders may appear to be completely dissolved when hot, some of them may be thrown out or precipitated when the solution is cool.

Dyes should be dissolved in hot water in enameled vessels. Boiling is unnecessary and frequently harmful. Excess water should be avoided. If the dye presents any difficulty in becoming evenly distributed throughout the batch of soap, it may be emulsified with the perfume composition by the addition of an ounce or so of sulfonated castor oil, for greater ease of dispersion. Dyes should not be blended by the soap maker, as any desired shade can be supplied by the dye manufacturer. W. J. W. Fisher. *Soap, Perfumery & Cosmetics*, **1936,** 532-4.

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In making dry-cleaning soap, the first step is to determine the saponification value of the oil to be used. One of the best oils for the purpose is redistilled oleic acid. A very strong solution of lye should be employed in order to keep the moisture content of the soap to a minimum. Potash lye of 50° Be. is suitable and is run into warm oleic acid at short intervals. This produces a fairly dry soap. Crutching and stirring must be continuous until a neutral reaction is obtained. The amount of caustic potash required is given by the saponification test made. The actual strength of the potash should be ascertained by titration, so that an equivalent amount can be taken. Saponification should be carried out in a steam-jacketed pan. Saponification is completed by gentle heating, when the mass becomes clear.

When saponification is complete additional redistilled oleic acid is heated gently and approximately 3 per cent is added for superfatting, along with about 1 per cent of alcohol, which helps to keep the oleic acid and soap mobile and assists in incorporation. Steam is then turned on to allow the moisture to be driven off gradually from the soap mass.

This soap is soluble in naphtha and in benzene. It should be packed in air tight containers until it is to be added to the solvent. A. N. Ghosh. *Indian Soap J.* **3,** 53-55 (1936).

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Colloids as Soap Aids

Hydrophilic colloids such as sodium caseinate and sodium albuminate possess capillary activity and other soap-like properties at the proper pH, so that they make suitable addition products to soap. Their viscosity also plays an important role in intensifying emulsifying properties. This factor is also noteworthy in connection with the use of gelatin solution as an emulsifying agent. Colloids such as starch, aluminum hydroxide and silicic acid are not capillary-active and therefore do not promote the emulsifying power or detergent action of soap. There seems to be a relation between capillary activity and molecular weight; those colloids which are active having an average micellar weight of 800 to 30,000, those which are inactive such as silicic acid and carbohydrates having a micellar weight of around 100,000. Gold number is no criterion for the measurement of protective colloid action as applied to the detergent and emulsifying properties of colloids. K. Lindner. *Seifen-, Ol- und Fett-Industrie* **22,** 264 (1936).

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Bleaching Shampoos

Shampoos having a bleaching action may be made containing 2-3 per cent of camomile or henna extract, or up to 10 per cent of sodium perborate:

1.

	Parts
Soap powder	300
Borax	75
Soda ash	125
Sodium bicarbonate	30
Henna extract	5

2.

	Parts
Soap powder	250
Sodium bicarbonate	75
Borax	125
Sodium perborate	30

After the soap has been thoroughly removed from the hair the shampoo can be followed by a rinse with a weak organic acid such as boric acid or malic acid, or even with sodium acetate, to give the hair luster and smoothness. *Allgemeine Oel- und Fett-Ztg.* **33,** 372-6 (1936).

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Check Soap Foaming Power

A comparison of the foaming power of tallow and coconut oil soaps was made at 20° C. with distilled water and water of 15 German degrees of hardness. The coconut oil soap was made with 2 parts of coconut oil to 1 part of lye, so that considerable unsaponified oil was present. The results were as follows:

TOILET SOAP
(0.25 per cent solution)

Foam number after:	*In distilled water*	*In hard water*
3 minutes	39	16
5 minutes	29	9.5
10 minutes	18.5	4.5

COCONUT OIL SOAP
(1 per cent solution)

Foam number after:	*In distilled water*	*In hard water*
3 minutes	36.5	47
5 minutes	27	32
10 minutes	16.5	19.5

The calcium soap formed with coconut oil fatty acids increased the foam number, while with tallow soap the number decreased, as expected. *Riechstoff Industrie und Kosmetik* **11,** 141 (1936).

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Iodine in Soap

Free iodine in a solid soap would disappear in aqueous solution, owing to the liberation of hydrolysis alkali, with which iodine reacts. It is therefore doubtful whether iodine soap has any greater germicidal power than ordinary soap. The characteristic smell of iodine can be suggested, if not actually matched, by cresylic acid, with perhaps a "top-note" formed by a trace of iodoform.

The analytical determination of iodine in soap is a matter of some difficulty, but the following method is capable of giving results to 0.001 per cent of iodine: Shred 10 grams of soap into a small porcelain dish, moisten with a solution of caustic potash, reduce to dryness and carefully ash. All the iodine originally present is now in the form of iodide. The ash is extracted with hot water and filtered, and the filtrate neutralized to methyl orange with mineral acid. Transfer to a separatory funnel and acidify with a few drops of concentrated sulfuric acid; then add a few drops of sodium nitrite. Shake the contents of the funnel with 25 cc. of carbon tetrachloride to extract the liberated iodine. Extract with another 25 cc. of carbon tetrachloride. Combine the extracts, wash with water and transfer to a flask for titration. Add 50 cc. of water and 10 cc. of 10 per cent potassium iodide solution, and titrate with 0.1 *N* thiosulfate solution, using starch as an indicator. Shake thoroughly during the titration to get all of the iodine into the aqueous layer, as it is quite soluble in carbon tetrachloride. John Glenn. *Soap, Perfumery & Cosmetics,* **1936,** 531.

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Determining Fat in Copra

The Wesson refractometric method for determining fat in cottonseed by measuring the refractive index of the naphthyl chloride extract may be applied to copra. Benzyl alcohol or tetralin can be used in place of naphthyl chloride. The results are in close agreement with those obtained by the usual Soxhlet extraction. The refractometric method saves considerable time and is sufficiently accurate for all practical purposes. J. P. Groenhof. *Pharm. Weekblad* **73,** 1002-16 (1936).

◆

Rosin Determination in Oils

An exact and rapid method for determining rosin in sulfonated oils is as follows: To 3 grams of oil in a 100-cc. tall beaker add a little methyl alcohol and evaporate to dryness three times. Add 30 cc. of methyl alcohol and 5 cc. of sulfuric acid and boil gently for 5 minutes. Add ether and shake out with saturated salt solution until neutral to litmus. To the ether solution add an equal volume of ethyl alcohol and titrate with 0.5 *N* sodium hydroxide solution to a phenolphthalein end point. W. Riess. *Collegium* **1936,** 348-9.

SHAVING CREAMS

AS with all soaps made by the semi-boiled method, the ingredients of shaving creams should be of the highest quality. A formula embodying most of the advantages of this class of soap material is as follows:

	Parts
Stearin (for giving body to the cream)	26
Coconut oil (for its lathering properties)	7
Bleached palm oil (to counteract the sharpness of the coconut oil)	4
Olive oil (for its soothing action)	4
Rosin (to prevent rancidity development)	2
Glycerine (to keep the cream mobile and the lather in a moist state when applied)	9
Potash, 60° Tw. (about 33° Be.)	29
Soda, 60° Tw. (about 33° Be.) (to lift the lather)	1
Water (which may be varied a little in amount)	18
	100

The rosin and the whole of the fatty material except the olive oil, are melted in the pan and saponified at 75° C. (167° F.) with the mixed alkalies, water and glycerine. After the pan has been left for about 4 hours and saponification is complete, there should be a strong "bite" when a bit of the cream is applied to the tongue. The olive oil is now added and well stirred in. Part of the olive oil will react with alkali but part will remain free.

The above formula can be modified by the manufacturer to suit his own requirements, using more or less of the individual ingredients, according to the properties which it seems desirable to accentuate. A lighter and more profuse lather will be obtained if more coconut oil or more soda is employed. A softer cream results if the amount of stearin is reduced and a little lard substituted, but it is of utmost importance to bear in mind the different saponification values of the fatty materials; also that potash has only 5-7 the strength of soda, and that if the percentage formula is adhered to there must be a corresponding decrease of one or more of the ingredients when others are increased.

When the cream is cold, it is passed through a machine that will have a kneading action, such as a paste mixer or even a toilet soap plodder, when, after a day or so, it should develop the sheen common to good shaving creams.

Brushless shaving creams are made in much the same way as the regular creams. The following is a typical formula:

	Parts
Stearin	20
Olive oil	4.5
Spermaceti	1
Glycerine	3
Water	10
Potash, 30° Tw. (about 19° Be.)	1.5
Water	120

The first 5 items including the 10 parts of water are placed in the pan and brought to a temperature of 40° C. (104° F.). The potash and remaining water are mixed in a separate vessel and heated to the same temperature. When both mixtures are at 40° C., the caustic and water are plunged rapidly into the fatty materials and strongly agitated. The mass is at first a thin emulsion which soon changes to a transparent gel which, with continued stirring, again changes to an opaque thin cream.

This soon begins to thicken. When it can stand alone, stirring must immediately cease and the pan be left at rest until cold; or the contents can be run into smaller vessels to cool. When entirely cold, the cream is fairly firm, but upon kneading or further stirring in the pan, it assumes a consistency suitable for putting into tubes. Perfume is added during the cold mixing. W. J. W. Fisher. *Soap, Perfumery & Cosmetics*, **1936**, 610-3.

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The neutral equivalents of higher fatty acids can be determined with great accuracy by titrating the acid in absolute alcohol solution, with sodium ethylate as the base, and using thymolphthalein as the indicator. The alcohol has to be purified, and the stearic acid used for standardizing the sodium ethylate is crystallized from acetone until a constant melting point of 69.6-69.8°C. is obtained. R. B. Sandin, M. Kulka and D. W. Woolley. *Ind. Eng. Chem., Anal. Ed.* 8, 355-6 (1936).

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At low concentrations soap solutions cause the flotation of graphite. This action reaches a maximum for sodium oleate in 0.05 per cent solutions and for coconut and castor oil soaps in 0.05-0.1 per cent solutions. Above these concentrations, flotation is replaced by peptization, which reaches a maximum for sodium resinate and saponin at 0.2 per cent, for oleate at 0.4 per cent and for the other soaps at 0.5-1.0 per cent concentrations. (Ed. Note—Flotation is taken to mean the condition when the solid particles float on the surface of the soap solution, and peptization the condition when the solid particles are dispersed more or less homogeneously throughout the soap solution.) Saponin does not cause flotation at any concentration. Addition of caustic soda causes peptization to begin at lower concentrations.

As the sodium hydroxide concentration increases, resinate solutions undergo more peptization than oleate solutions, in which coagulation finally occurs. Addition of hydrochloric acid in small amounts does not affect the peptizing power of oleates, but it destroys that of resinate entirely, and at concentrations above 0.015 moles of hydrochloric acid per liter, the peptizing power of oleates is also destroyed. On the other hand, alkalies cause a decrease in the flotation power of resinate solutions, while hydrochloric acid does not harm it. Hydrophilic kaolin and similar clays simultaneously undergo flotation and peptization by the soap solutions. With the aging of soap solutions, flotation power steadily diminishes, while

peptizing power rises to a maximum and then falls. N. N. Serb-Serbina and G. V. Zakharova. *Vsesoyuznuii Nauch.-Issledovatel. Inst. Zhirov, Untersuchungen uber Physikochemie der Waschwirkung* **1935**, 67-92.

Emulsifying Power of Soaps

The emulsifying power of soaps toward the system water-benzene is in the decreasing order,—castor oil soap, sodium oleate, coconut oil soap. This is the reverse of the series for foam formation. In the presence of calcium ion, coconut oil soap gives the most stable water-in-oil emulsion at a concentration of 0.05 per cent, and castor oil soap at 0.01 per cent. Kaolin particles less than 10 μ in diameter also stabilize water-in-oil emulsions and so are hydrophilic. N. M. Smirnov. Ibid. **1935**, 116-25.

Rice Oil for Soap Use

Rice oil is an oil obtained from rice meal by expression or extraction. Due to the high acidity of this oil it can only be used for soap. The oil has a rather pale greenish yellow color, with constants as follows: Iodine value (Wijs) 103.5, saponification value 189, unsaponifiable matter 4.89 per cent, acid value 101.5, free fatty acids as oleic 51 per cent, and titre 23.9° C. Assuming the absence of linolenic acid in the sample, the figures indicate the following compositions: oleic acid 39.56, linoleic acid 39.91 and saturated acids 15.64 per cent. Commercial quantities of this oil are now available from abroad. H. P. Trevithick and R. R. Lewis. *Oil & Soap* **13**, 232-3 (1936).

Cleaner and Bleach

A bleaching and cleaning agent contains 1 part by weight of an oxygen-yielding compound, 1 to 3 parts of a water-soluble salt of a phosphoric acid poorer in molecularly combined water than orthophosphoric acid, 1 to 3 parts of an inorganic alkaline salt and 2 to 6 parts of a saponaceous foaming agent. Henkel & Cie. G.m.b.H. Canadian Patent No. 360,841.

Triethanolamine Shampoos

A liquid shampoo made with triethanolamine is prepared as follows:

	Parts
Coconut oil fatty acids	63
Olein	27
Triethanolamine	48
Water	60

The coconut oil fatty acids and olein are melted together and brought to a temperature of about 50° C. In another vessel the triethanolamine is gently heated with the water and then the fat mixture added to it. After thorough mixing, reaction takes place rapidly. When reaction seems complete, add 410 parts of water and again mix well. The soap obtained should be completely clear, so that no filtration is necessary. If the soap is not clear, add a little more triethanolamine and mix well. A part of the water can be replaced by alcohol. Perfume is stirred into the soap after cooling. A second formula is as follows:

	Parts
Olein	110
Coconut oil fatty acids	80
Triethanolamine	100
Alcohol or half alcohol and half water	110

Since triethanolamine soap is expensive, it can be mixed with other liquid soaps. *Seifen-, Öl- und Fett-Industrie* **22**, 244 (1936).

Fat Hydrolysis

By reducing the amount of water used in the hydrolysis of fats and using a common solvent for fat and water, a more rapid hydrolysis can be effected. For example, by using 100 parts of fat, 400 parts of acetone, 15 parts of water and 0.5 parts of 98 per cent sulfuric acid and heating in an autoclave with steam coils to a pressure of 150-200 pounds, from 50 to 60 per cent of the fat can be hydrolyzed in 15 minutes to 1½ hours. More water is then pumped into the autoclave under pressure and heat applied for 15 minutes to an hour, when the hydrolysis will have reached 95 to 100 per cent of the fat, depending on its nature. The acetone is evaporated until the glycerine forms a separate layer from the fatty acids, from which it can be recovered in the regular manner.

Advantages of this process are: Pretreatment of fats with acid is unnecessary; the time required is only 3 hours for complete operation; the glycerine is left in a more concentrated state; the fatty acids can be separated into solid acid and red oil by a proper mixture of water and acetone after hydrolysis is complete; and the amounts of acetone and water can be varied so as to yield on filtration a high grade of solid fatty acid or a high grade of red oil. E. K. Wallace and J. R. Moore. *Am. Perfumer* **33**, 47 (1936).

Sodium Naphthenate in Soap

Sodium naphthenate is a grease-like solid combining excellent emulsifying and foam-producing properties. Its gelation capacity is very high, and even at 0° C. concentrated solutions remain jellified. This property is of use in the manufacture of neutral soft soaps which do not precipitate crystals. Sodium naphthenate has high disinfecting properties, and these are useful in making liquid soaps. A typical formula is as follows:

	Per Cent
Coconut oil	16
Caustic potash	4½
Pine oil	14
Sodium naphthenate	5
Water	60½

The gelation capacity of sodium naphthenate may be taken advantage of in preparing soaps which are applied without water for cleansing purposes. These consist of sodium naphthenate, agar-agar, glycerine, soft soap, and ammonia made up into an aqueous solution containing 20 per cent of total solids. *The Manufacturing Chemist* **7**, 304 (1936).

Fat Stabilization

Beef fat, lard, hydrogenated cottonseed oil, cottonseed oil compounds, etc. are stabilized against oxidation by mixing therewith a quantity of a heavier-than-water distillate obtained in deodorizing hydrogenated sesame-seed oil. Donald P. Grettie. British Patent No. 446,792.

Products and Processes

Kettle Cleaning

A large iron soap kettle (7000 liter capacity) became rusted and a quick method was necessary for cleaning. A method requiring a minimum of labor and expense was found to be as follows: Superficial and loose rust is first removed by brushing with a stiff steel brush. After this the kettle is filled with water, heated nearly to boiling and sulfuric acid added to give a final concentration of 3-4 per cent. The walls and bottom of the vessel are scrubbed while the dilute acid is in contact with them. The acid is then drawn off, the vessel boiled up twice with fresh water, and then once with a dilute soda solution to neutralize any traces of acid. This method of restoration is much more efficient than any simple mechanical method. *Seifensieder-Ztg.* **63**, 704 (1936).

Soap for Children

Children's soap should be especially mild with a minimum of free alkali. Superfatting with 5 per cent of lanolin may also be desirable. Any soap will give hydrolysis alkali when used in very dilute solution because of the decrease in the colloidal nature of the solution when diluted. Since children may have very sensitive skins, this effect can be counteracted by the inclusion of sulfonated castor oil (Turkey red oil), which is faintly acid. A suitable fat charge would be 80-85 per cent tallow, 8-12 per cent Cochin coconut oil and 8 per cent castor oil. *Seifensieder-Ztg.* **63**, 681 (1936).

Processing and Soap Structure

Soap was prepared from a hydrogenated sunflower-oil stock containing 10 per cent of tallow and a small amount of wax. Each step following the solidification was followed by taking photomicrographs of samples. The milling as well as the plodding of soap tends to orient the fiber-like crystals of soap in positions parallel to the direction in which the soap is forced, i.e., parallel to the length of the strand or bar. Milling and plodding not only result in grinding the soap to a more homogeneous mass and distribute perfume and color, but they also orientate the structure aggregates. The greater plasticity of soap that has been milled and then plodded can be attributed to its oriented structure. Tests in a special apparatus show that milled soap washes away faster than unmilled soap made from the same raw products. B. Tyutyunnikov and N. Kas'yanova. *Allgem. Oel- u. Fett-Ztg.* **33**, 323-9 (1936).

Bathtub Cleaners

Suitable bathtub cleansers may be made with the following ingredients:

1.

	Parts
Trisodium phosphate	250
Soap powder	250
Fine abrasive	500

2.

	Parts
Trisodium phosphate	100
Soap powder	200
Fine abrasive	700

These give efficient mechanical and detergent action. *Seifen-, Öl- und Fett-Industrie* **22**, 284 (1936).

Washing Powder

Soda ash, soap, and alkali silicate if desired, are mixed with warming. After a partial slow cooling the mixture is converted to shavings with rapid cooling, e.g., by passing between cooled rollers, and dried. A perborate may then be incorporated in a mill. C. Schou's Fabriker Aktieselskab. Danish Patent No. 51,891.

Bleaching Paste Soap

Paste soap can be bleached with sodium or potassium hypochlorite solution. This is used in a concentration of 9 to 12° Be. and is added in a quantity amounting to 10 to 25 per cent of the soap to be bleached. It should be added while the soap is cooling, and not until it has reached a temperature of 60° C. (140° F.). Too much bleach should be avoided or the soap will carry a chlorine odor. If necessary the latter can be removed by the addition of a little antichlor (sodium thiosulfate), made up in a concentrated solution. *Seifensieder-Ztg.* **63**, 662 (1936).

Fat Odors Improved

Oils and fats are improved as regards odor, taste, keeping qualities and consistency by mixing them with a fermentable substratum which is brought into active fermentation by micro-organisms, such as yeasts, lactic ferments and ferments producing propionic and butyric acids. The oils or fats are separated when fermentation has ceased. A small amount of a catalyst such as nickel, tin, salts of manganese, etc. may also be added. Willy Ekhard. French Patent No. 797,991.

New Water Softener

A new water-treating chemical for softening and neutralizing water has been announced recently by Creative Chemical Co., Pittsburgh. This compound, known as "Zeolene Watertone," is a nonviscous liquid which is fed into the water. The compound is said to give a constant supply of zero hardness water of neutral reaction on the pH scale. The chemical is applied by means of a special feeder which can be attached to a flow line, to a storage tank or filter, or to the water line for direct treatment of water.

New Detergents Patented

Detergent compounds are formed by the union of anhydrous alkali carbonates with fatty and resin acids giving compounds soluble in water. Examples are the addition compounds of anhydrous sodium carbonate with abietic, oleic and copra fatty acids. Organic solvents such as cyclohexane, carbon tetra-

Pay only for the Corrosion Resistance

YOU ACTUALLY USE

5000-lb. capacity Nickel-Clad Steel "Perfection" Soap Crutcher built by Houchin Machinery Co., Hawthorne, New Jersey. Used by a well-known manufacturer of high grade soaps.

For Heavy Equipment Get the Advantage of Nickel in Economical NICKEL-CLAD STEEL

THERE MUST be compelling reasons why the soap industry uses Nickel-Clad Steel in such quantities.

And there are. Basic causes are these: A large proportion of the soap-maker's equipment is, and is bound to be, weighty and massive. Second, to keep fine soaps pure, the metals which touch them MUST *not rust* and *must* be highly resistant to corrosion from caustic, salt and fatty acids.

But to build heavy machines, like this 5000-lb. capacity crutcher, of solid corrosion resistant material, would involve an utterly needless expense.

For with Nickel-Clad Steel *you pay only for the corrosion resistance that you actually use.* The only surface that touches your costly ingredients is Pure Nickel . . . the metal that soap-makers know assures purity. The Nickel goes 10% or 20% deep . . . and that's deep enough.

And the total cost of fabricated Nickel-Clad Steel is generally ⅓ to ½ the cost of solid Nickel equipment.

When you know too, that Nickel-Clad Steel can be welded, with no loss of corrosion resistance . . . you have most of the answers as to the why of its widespread use.

Ask for full information on fabrication, contained in Bulletin T-4. And get your copy of "Lukens Nickel-Clad Steel". Address:

THE INTERNATIONAL NICKEL COMPANY, INC.

67 WALL STREET, NEW YORK. N. Y.

chloride, mineral oils and benzines may also be added to the reaction mass and these are rendered miscible with water. Raymond Vidal. French Patent No. 797,201.

Purified Whale Oil

Purified oils are obtained from whale or seal blubber or bones on floating factories by heating the raw material, preferably comminuted, to about 70° C. in an oil bath, and subjecting the oil obtained immediately to a refining process. The residue of cracklings obtained in the heat treatment yields a further amount of oil by pressing, and the residue is then heated in a water bath at 70° C. The supernatant layer of oil thus formed is combined with the oil obtained in previous stages. The aqueous layer is centrifuged and worked up to yield the glue and gelatin contained therein and the solid residue is dried and used as food for animals. The oil is treated immediately after recovery with a small amount of caustic soda solution to remove fatty acids, albumin decomposition products and mucins,—dried and treated with superheated steam *in vacuo*. Gesellschaft zur Verwertung Fauth'scher Patente m.b.H. British Patent No. 446,997.

Hard Water Cleanser

As an example of a cleansing agent that can be used in hard water or sea water, 20 parts of dodecylamine hydrochloride are mixed with 10 parts of an ester of glycol and montan wax, and 70 parts of lactose. The mixture is passed through an extrusion press and formed into bars, strips or other pieces. I. G. Farbenindustrie A.-G. British Patent No. 443,795.

Surface Activity of Soaps

The surface activity of aqueous solutions of sodium oleate, palmitate and stearate increases with temperature, since the degree of dispersion rises and the micelles reach a size at which the surface activity is at maximum. Very dilute solutions of these soaps contain micelles of almost molecular dimensions, the size of which increases with time. At concentrations of 0.02-0.03 per cent this rise continues for 24-27 hours, and then the activity begins to decrease. At higher concentrations, the activity falls off from the beginning. At 40° C. the micelle size governs the activity and the surface tension decreases in the order oleate, palmitate, stearate. At 60° C. the micelles are smaller and constitutional factors become important. The decreasing order then is stearate, palmitate, oleate. Unless 30-60 seconds are allowed for the formation of drops in the stalagmometer or of bubbles in the apparatus of Taubman, widely divergent results are obtained in determining surface tension. This accounts for the great differences between the values of other workers for these soap solutions. E. K. Venstrem and A. B. Taubman. *Vsesoyuznuii Nauch.-Issledovatel. Inst. Zhirov, Untersuchungen uber Physikochemie der Waschwirkung* **1935**, 35-48.

Cleaning Compound

A cleaning composition is made by adding ammonium carbonate, soda ash, soap powder and soap to water and heating. While the mixture is boiling, a solvent-abrasive substance, washing blue, and sand soap are added. When viscous the mixture is allowed to cool and set. C. R. Garnsey and W. R. Manning. Australian Patent No. 24,156.

Foaming Power of Soaps

In dilute solutions, castor oil soap lowers the surface tension more than palm kernel and coconut oil soaps. Palm kernel oil soap leads in foaming power, followed by coconut oil and then castor oil soaps. Different methods of determining the amount of foam give different absolute results. Aging decreases the amount of foam formed. The amount is increased if the soap is dissolved in hot water and the solution cooled, and if enough soda ash is present to give a pH value of 9.6-10.3. N. N. Petrova, M. I. Komarova and E. N. Bobuileva. *Vsesoyuznuii Nauch.-Issledovatel. Inst. Zhirov, Untersuchungen uber Physikochemie der Waschwirkung* **1935**, 93-115.

Toilet Soap Perfumes

The following are suitable perfumes for use in toilet soap:

JASMINE

	Grams
Cinnamic alcohol	100
Styrax	100
Amyl cinnamic aldehyde	300
Orris powder	10%

This is for 100 pounds of soap. Linalool can be used in jasmine to the extent of 5 per cent, in which case it can replace some of the styrax. Also about 10 per cent of hydroxycitronellal can be added. Inclusion of 1 gallon of 10 per cent bromstyrol solution greatly helps to bring out the flowery odor.

LILAC

	Grams
Hydroxycitronellal residue	25
Phenyl acetaldehyde, 50%	5
Terpineol	40
Amyl cinnamic aldehyde	10
Bois de rose femelle	9
Styralyl acetate	1

Patchouli may be added as a fixative, but not more than 1 per cent should be used.

MUGUET OR LILY OF THE VALLEY

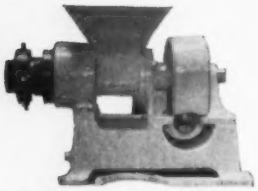
	Grams
Linalool	40
Ionone alpha	10
Isoeugenol	5
Sandalwood	5
Geranium, Algerian	5
Amyl cinnamic aldehyde	10
Aldehyde C_{11}	1
Musk xylol, dissolved in diethyl phthalate or benzyl benzoate	5

Alexandre Gimonet. *Soap, Perfumery & Cosmetics* **1936**, 625-7.

Cleaners from Aliphatic Alcohols

Cleaning and wetting agents are made from aliphatic alcohols of low molecular weight which are substituted by at least 1 aromatic radical of at least 9 carbon atoms. The products are hydrogenated and groups causing solubility in water introduced. Henkel & Cie. G.m.b.H. French Patent No. 796,980.

HOUCHIN MACHINERY CO. HAWTHORNE, N. J.



2½" Laboratory Plodder
No. 90B
1½ outlet. Good for cakes
up ½" x 1⅛" 1/3 H.P.

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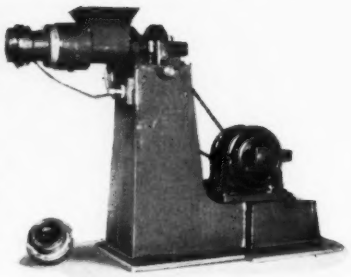
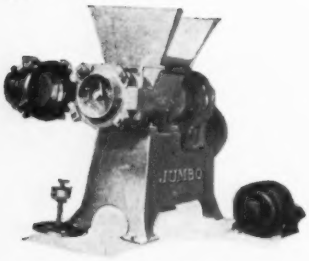
With our No. 90 combination Plodder sample soaps can be made without milling the soap. The cakes will be compressed equal to the larger machines. This machine is also equipped with our new electric heater and forming plate holder.



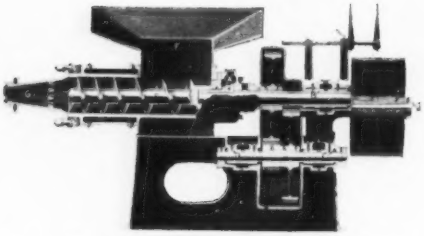
No. 90 Plodder
Made in two sizes 4" and 6"
2¾" outlet. Good for cakes
up to 4 oz. 1" x 2" x 3".
MILLESS METHOD

Electric Heater and
Forming Plate Holder
made to fit all plodders.

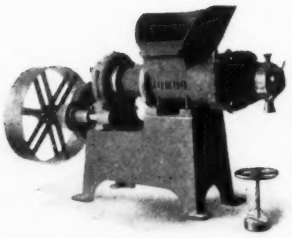


No. 92B
Combination Plodders made
in two sizes 8" and 10"
MILLESS METHOD

PLODDERS
PRODUCE RIBBONS
SAME AS MILLS

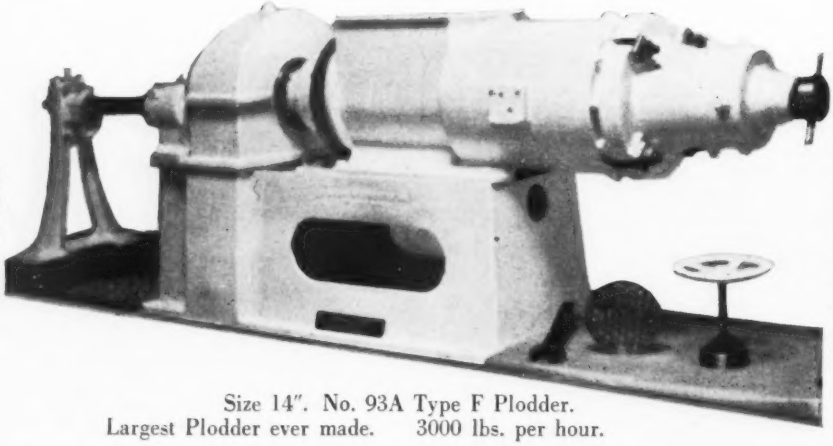


Extra Heavy Type F Plodder No. 93 made
in two sizes 8¾" and 12".



No. 92
Standard Finishing Plodder
made in two sizes 8" and 10"
gear drive.

All gears in our Plodders run in oil tight cases.



All Bearings in our Plodders are bronze lined. The Bearing back of the screen has oil sealed ring to prevent oil from getting in the soap.

Size 14". No. 93A Type F Plodder.
Largest Plodder ever made. 3000 lbs. per hour.

New Equipment

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York, mentioning the number of the item.

283—"Metso 99"

Philadelphia Quartz Co., Philadelphia, has recently issued a bulletin reviewing the properties of "Metso 99" and its use in various cleaning operations. Copies of the bulletin are available.

284—Glyco Chemicals

Glyco Products Co., N. Y., has just issued a new booklet describing its line of synthetic specialty chemicals and the uses to which they may be put. Copies are available.

285—Link-Belt Stoker

Link-Belt Co., Chicago, has just issued a 28-page illustrated booklet on their automatic coal stokers for industrial use in sizes up to 300 H.P. Copies will be sent on request.

286—"Process News"

In the current issue of "Process News" published by F. J. Stokes Machine Co., Philadelphia, are pictures of a number of new installations and shop views of recently built equipment for the chemical, process, and pharmaceutical industries. Copies are available.

287—Stainless Clad Steel Drums

The development of stainless clad steel shipping containers has recently been announced by Stevens Metal Products Co., Niles, Ohio. This development is claimed to fill the need for a moderately priced drum that offers complete resistance to corrosion by a wide variety of materials. Copies of an 8-page folder describing these "Ingaclad" drums are available through *Soap*.

288—Portable Cranes

Lewis-Shepard Co., Watertown, Mass., has recently issued an illustrated folder describing its newly designed portable cranes, hand and electric powered, available in a variety of types. Copies are available through Lewis-Shepard Co. or by addressing the publishers of *Soap*.

289—Furnace Constructions

Geo. P. Reintjes Co., Kansas City, has just issued an illustrated booklet describing special furnace constructions which it has recently developed. Copies are available.

290—Coupled Pump Bulletin

The Cameron Pump Division of Ingersoll-Rand Co., New York, has just issued a new bulletin covering its line of coupled pumps of capacities from 150 to 5,000 g.p.m. against heads between 20 and 250 feet. The pumps can be used for handling nearly all liquids. Copies are available through Ingersoll-Rand Co. or *Soap*.

291—Vibrating Screens

An improved "Selectro" Vibrating Screen, made of stainless steel and equipped with a selective throw device which makes 8 positions available, has been announced recently by Productive Equipment Corp., Chicago. This company has issued a 32-page booklet containing data on controlled vibration and screening efficiency, copies of which are available on request.

Announce Net Earnings

American Home Products Corp. has announced that consolidated net earnings of the company and its subsidiaries for the nine months ending Sept. 30, after deducting depreciation, interest and normal Federal income taxes, amounted to $2,157,980.73, equivalent to $2.91 per share of the 741,060 shares of stock outstanding.

Name 154 Soap Taxes

A total of 154 taxes on soap are enumerated in an article on "New Deal Taxes" appearing in the October number of the *Farm Journal*. These are summed up as follows:

Paid by Soap Manufacturers

1. Federal Tax on Imported Oils
2. Federal Excise Tax — (Toilet Soap)
3. Federal Income Tax
4. Federal Capital Stock Tax
5. Federal Gasoline Tax
6. Federal Tax on Lubricating Oil
7. Federal Tax on Telephone, Telegraph, Cable and Radio Messages and Leased Wires
8. Federal Tax on Electricity
9. Federal Tax on Passenger Automobiles
10. Federal Tax on Motor Trucks
11. Federal Tax on Automobile and Truck Parts and Accessories
12. Federal Tax on Automobile Tires and Tubes
13. Federal Unemployment Tax
14. Federal Surplus Tax on Corporations
15. State Income Tax
16. Real Estate Tax
17. Personal Property Tax
18. State Sales Taxes
19. State Use Tax
20. State Motor Registration
21. Automobile Driver's License Tax
22. Product Registration Tax
23. Corporation Franchise Tax
24. State Motor Fuel Tax
25. State Unemployment Tax

Paid by Farmers Supplying Raw Materials

13 of the above, plus sales taxes on implements and supplies

Paid by Refiners

All of the above taxes except four

Paid by Transportation Companies

11 of the above and 16 other special taxes

Paid by Producers of Alkali, Potash, Perfumes, etc.

20 of the above taxes, plus state sales taxes and tariff duties on perfumes

Paid by Wholesaler

All but the first two of the above taxes

Paid by Retailer

21 of the above, plus store license tax

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Without a Compact Technical Library

And No Such Library Is Complete Without These Well-Known

TECHNICAL BOOKS

Perfumes, Cosmetics and Soaps, by Poucher. New and revised edition of this standard reference. Volume I, a dictionary of raw materials with perfume formulas, 440 pages, $8.00. Volume II, dealing with the manufacture of perfumes of all types, 426 pages, $8.00. Volume III covers the manufacture of cosmetics, 228 pages, $7.00.

Modern Cosmetics, by Chilson. 400 pages of practical, usable information for the manufacturer of cosmetics. Formulas and manufacturing instructions for everything in the cosmetic line, $6.00.

The American Soap Maker's Guide, by Meerbott and Stanislaus. The most recent American publication on soap manufacturing. 750 pages. $7.50.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. A handy reference book listing 10,000 miscellaneous formulas, including special sections for soaps, polishes, insecticides, etc. 800 pages. $4.00.

The Industrial Chemistry of Fats and Waxes, by Hilditch. A study of the fats and waxes in relation to their use in industry. 450 pages. $7.50.

Hydrogenation of Organic Substances, by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages. $15.00.

Modern Soap and Detergent Industry, by Martin. Second Edition. An outstanding contribution to the literature on soap manufacture. Thoroughly up to date work covering processes, apparatus and formulas. In two volumes—cloth binding, 6½ x 10½. Price $14.00 for each volume.

Modern Soap Perfumes, by Sedgwick. A practical handbook on the science of soap perfumery. $1.00.

Laundry Chemistry, by A. Harvey. A manual on the chemistry of laundry materials and methods. 120 pages, 5 x 7½. $1.75.

Pyrethrum Flowers, by Gnadinger. A complete compilation of all known facts on pyrethrum; its history, sources, evaluation, chemistry and uses. The problems involved in the manufacture of pyrethrum products are given thorough and lucid exposition. 270 pages. $5.00.

Soaps and Proteins, Their Colloid Chemistry in Theory and Practice, by Fischer. 272 pages. $4.00.

"Soap". Bound volumes for years 1927-28 and 1935 available at $12.00 each.

Soaps, by Hurst. A practical manual of soap manufacture. 440 pages. $8.50.

Soap Blue Book, A Buyer's Guide, Catalog and Business and Technical Reference Book. 195 pages. $1.00.

Spray Process for Soap Powders, by Thomas. Full discussion of latest manufacturing processes. 72 pages, in German. $1.50.

Vegetable Fats and Oils, by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods. $6.50.

Chemistry of Laundry Materials, by D. N. Jackman. A new book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalies, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages. $2.50.

The Chemical Formulary, by H. Bennett. This latest edition carries 5,000 formulae all different from those appearing in the first and second editions. 5½ x 8½. 550 pages. Price. $6.00. Copies of Vols. I and II are also available.

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Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,052,694, Tooth Paste and Process for Making Same, patented September 1, 1936 by Philip J. Breivogel, Glen Ridge, N. J., assignor to William R. Warner & Co. Inc., New York. A tooth paste consisting of a mixture of sodium perborate salt, a liquid petrolatum, a body supplying component, an emulsifying agent consisting of sodium lauryl sulfate, and alcohols of higher molecular weight.

No. 2,053,007, Cleaning Fluid, patented September 1, 1936 by George L. Parkhurst, Chicago, assignor to Standard Oil Co., Chicago. A composition of matter for use in dry cleaning, consisting of a dry cleaning fluid of the chlorinated solvent type and between approximately 0.01% and approximately 1% by weight of a substantially neutral oil soluble petroleum sulfonic soap, the petroleum sulfonic soap being dissolved in the dry cleaning fluid of the chlorinated solvent type.

No. 2,053,610, Protecting Animal Fibers from Textile Paste, Patented September 8, 1936 by Theodor Hermann, Frankfort-Hochst, Robert Seydel, Cologne-Dellbruck, and Walther Retter, Cologne-Deutz, Germany, assignors to I. G. Farbenindustrie Aktiengesellschaft, Frankfort-on-the-Main, Germany. Compounds suitable for protecting animal fibers from textile pests and corresponding to the formula R-CHX-R in which R denotes aromatic nuclei, containing at least one halogen atom and an etherified phenolic hydroxyl group, and X denoted hydrogen or an aromatic nucleus, any phenolic hydroxyl groups in the compounds being etherified by alkyl groups.

No. 2,053,613, Detergent and Polishing Compound, patented September 8, 1936 by Fred Grant Hunt, Jr., Denver, Colorado. A detergent and polishing compound comprising a finely comminuted admixture of siliceous materials and normally insoluble metallic sulfides in substantially the proportion of seven parts of the siliceous material to one part of the metallic sulfide, by weight.

No. 2,054,742, Dentifrice, patented September 15, 1936 by Eberhard Elbel, Duesseldorf, Germany, assignor, by mesne assignments, to International Scientific Products Co., Chicago. A dentifrice containing a soluble salt of a sulfuric acid ester of a higher aliphatic alcohol.

No. 2,055,491, Insecticide and Germicide and Process of Making the Same, patented September 29, 1936 by William H. Hampton, Berkeley, Calif., assignor to Standard Oil Co. of California, San Francisco. A new insecticidal and/or insect-repelling composition containing as its active ingredient a substantial quantity of Edeleanu extract.

No. 2,055,581, Soaps, patented September 29, 1936 by Jack Leben, Bushey, England, assignor to Ormul Products, Ltd., London. A soap consisting essentially of an alkali metal salt of a higher fatty acid in association with an alkylolamine salt of an aromatic carboxylic acid in a proportion of between 5 and 20 per cent of the amount of the former, whereby the degree of hydrolysis of the alkali metal salt when dissolved in water, is reduced.

Seal Fat

Seal fat contains about 10 per cent of glycerol, 0.4-0.7 per cent of unsaponifiable matter, 16.1-16.4 per cent of saturated acids, chiefly palmitic; solid unsaturated acid whose oxidation product is dihydroxystearic acid, and whose melting point is 117° C., about 6 per cent; liquid unsaturated acids of oleic acid type, about 52-55 per cent. Highly unsaturated acids having 4 or 5 double bonds make up at least 12 per cent of the fat; a portion of these acids can be resinified by polymerication. The color, flavor, chemical and organoleptic properties and commercial value of the fat are considerably influenced by the conditions of preparation. Oxidation and resinification of the highly unsaturated acids result from heating, but oil which is prepared at moderate temperatures has good possibilities for use in the food and soap industries. N. V. Williams and G. A. Makhrov. *Schriften zentral. Forschungsinst. Lebensmittelchem.* (U.S.S.R.) **4**, 157-65.

Miscibility of Oils—Alcohol

The amount of oil which dissolves in absolute or 90 per cent alcohol at 25° C. and the amount of alcohol dissolving in the oil were determined for almond, apricot-kernel, China-wood, codliver, corn, linseed, neat's-foot, olive, peach-kernel, poppy-seed, rapeseed, sesame, soybean, sunflower, walnut and whale oils. The valumes of the phases and the stability of emulsions were measured in the various systems. The results show that 2 or 3 times as much alcohol goes into the oil phase as oil into the alcohol phase. Increasing amounts of oleic acid when added to mixtures of alcohol and oil gradually decrease the volume of the alcohol phase and the stability and fineness of the emulsion. T. Ivan Taylor, Leslie Larson and Waynne Johnson. *Ind. Eng. Chem.* **28**, 616-18 (1936).

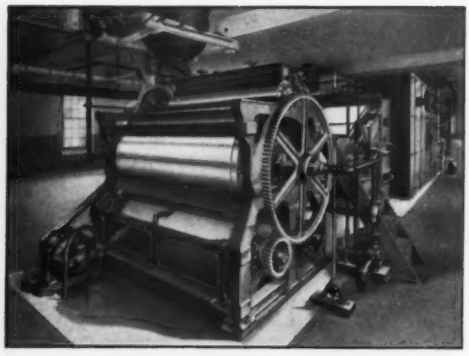
Candle Manufacture

Fatty acids for candles should be distilled with steam superheated to 200-250° C. at the highest possible vacuum. Heinz Sallentien. *Rev. brasil. chim.* (Sao Paulo) **1**, 269-70 (1936).

Dallas Co. in New Quarters

Southwest Chemical Co., Dallas, Texas, soap and sanitary products, has taken new quarters at 1220 Trunk St. The company was formerly located at 3408 Ross St.

PRODUCING THE PERFECT CHIP FOR ALL SOAP MAKING NEEDS



● New Type Proctor Chip Soap System producing extremely thin chips of textile soap in new plant of Original Bradford Soap Co., River Point, R. I.

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Metallic Soaps

(*From Page 37*)

After standing for an hour, the soap is filtered off through a cloth filter. Centrifuging is not advisable as the soap is thrown out as a hard, compact mass. The product is washed with water to remove soluble salts, and then with alcohol to free it from any unconverted fatty acid. Finally, a little ether will facilitate drying. Drying is carried out at about 45° C., but for soaps liable to decomposition or oxidation (such as those of unsaturated fatty acids), air drying is better.

THE main difference between common soaps and the metallic soaps is that the latter are completely, or almost completely insoluble, or rather dispersible, in water. It is this characteristic which gives them their special uses, and which in other situations may make them extremely troublesome. In the latter category comes the well-known effect of the precipitation of insoluble calcium soaps when hard water is used for laundry purposes. The result is soap wastage and deterioration of the fabric in which the soap is precipitated.

The fatty acids used in their preparation largely affect the properties of the soaps, and a slight change either in the character of the acid or in the method of manufacture may cause considerable variation in the chemical and physical properties. The nature of the acid radical of the soap largely determines its melting point and general physical properties, while the metal radical affects the chemical characteristics.

The metallic soaps prepared from fatty acids of high iodine value do not give a readily filterable, granular precipitate, but produce a fused, waxy product. Typical acids of this class are oleic and linoleic acids. A high melting point and low iodine value, on the other hand is conducive to the formation of a stable, crystalline and well-defined soap with a sharp melting point.

There are exceptions to this classification, however. For example, naphthenic acid gives fused soaps despite its low iodine value. On the other hand, the resinates and tungates, obtained from resin and tung acids respectively, are precipitated as powders, which are, however, unsaturated in character and therefore very liable to darkening and oxidation.

SOLUBILITY of the metallic soaps in non-aqueous solvents such as linseed oil, turpentine, benzene, petroleum spirit, etc. is widely variable, and depends not only on the radicals of which the soap consists, but also upon the method of preparation. The solvent must be hot, as dispersion does not as a rule take place in the cold.

In general the solubility decreases from naphthenates, linoleates, oleates, palmitates to stearates. Aluminium stearate is an exception to this rule as it forms transparent gels when in relatively high concentration. This characteristic is of great industrial importance and will be referred to again. The oleates and naphthenates have solubilities which are very similar in most respects. The outstanding exceptions are the lead and zinc soaps, the naphthenates of these metals being soluble in alcohol, while the oleates are almost insoluble.

The solubility of a freshly prepared soap is considerably higher than when drying has taken place, since the solution is more in the nature of a colloidal dispersion than a true solution. Indeed, it is doubtful whether any kind of soap forms a true solution. If too thorough drying is carried out, the colloidal properties of the soap are lost and the material will become insoluble.

The colloidal dispersions in various solvents are not quite stable, and the soap will often settle out. Lead linoleate, for example, dissolves easily in hot petroleum spirit, but is deposited in a short time. Nickel soaps settle out in the course of a few days. Ferrous soaps are easily soluble, but oxidation soon takes place to the ferric state, and as the latter soaps are highly insoluble, they are precipitated.

With due precautions it is, however, possible to prepare dispersions which will remain stable for very considerable periods. For such preparations the soap should not be precipitated at too low a temperature, as low temperatures are conducive to a semi-crystalline precipitate lacking in colloidal properties. At higher temperatures, a fused, resin-like mass is obtained and this is readily dispersible in organic solvents.

The solutions are stable even at elevated temperatures for prolonged periods when stabilized by the addition of a protective colloid such as beeswax, lanolin, etc. In some cases the presence of a protective colloid is essential for stability. For example, the palmitates and stearates readily come out of solution unless a protective colloid is present.

(*To be concluded in next issue.*)

Reduce Rose Acreage

Bulgaria's national policy of reducing rose acreage continues to make progress as farmers become more accustomed to the cultivation of pyrethrum which is recommended by the Government as a substitute crop, according to reports from the American Consul at Sofia. Approximately 8 million kilograms of rose flowers were gathered during the current season compared with 12 million kilograms in 1935, and the oil yield decreased from 2,400 kilograms to 1,700 kilograms, the report states. In the face of reduced production shipments to foreign markets during the current year are holding at high levels and are expected to bring the year's total to 1,700 kilograms. This compares with 1,671 kilograms in 1935, and 1,218 kilograms in 1934.

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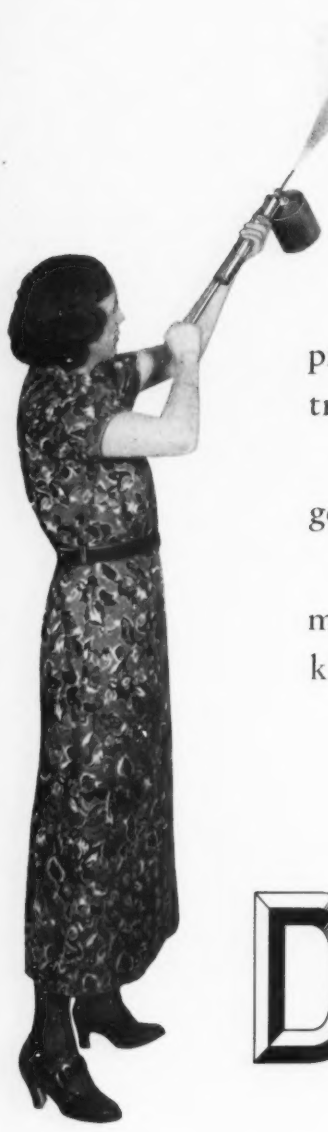

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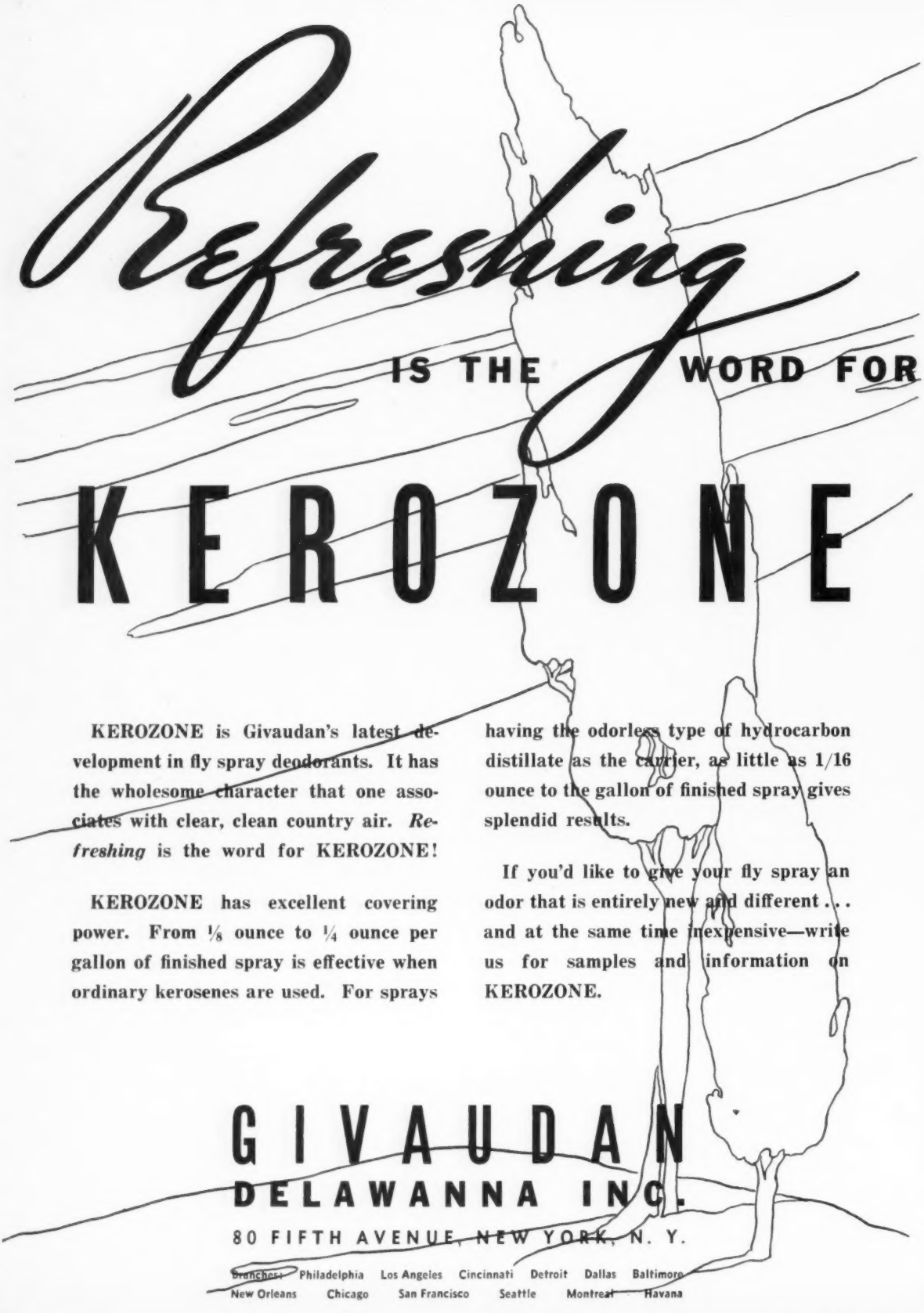

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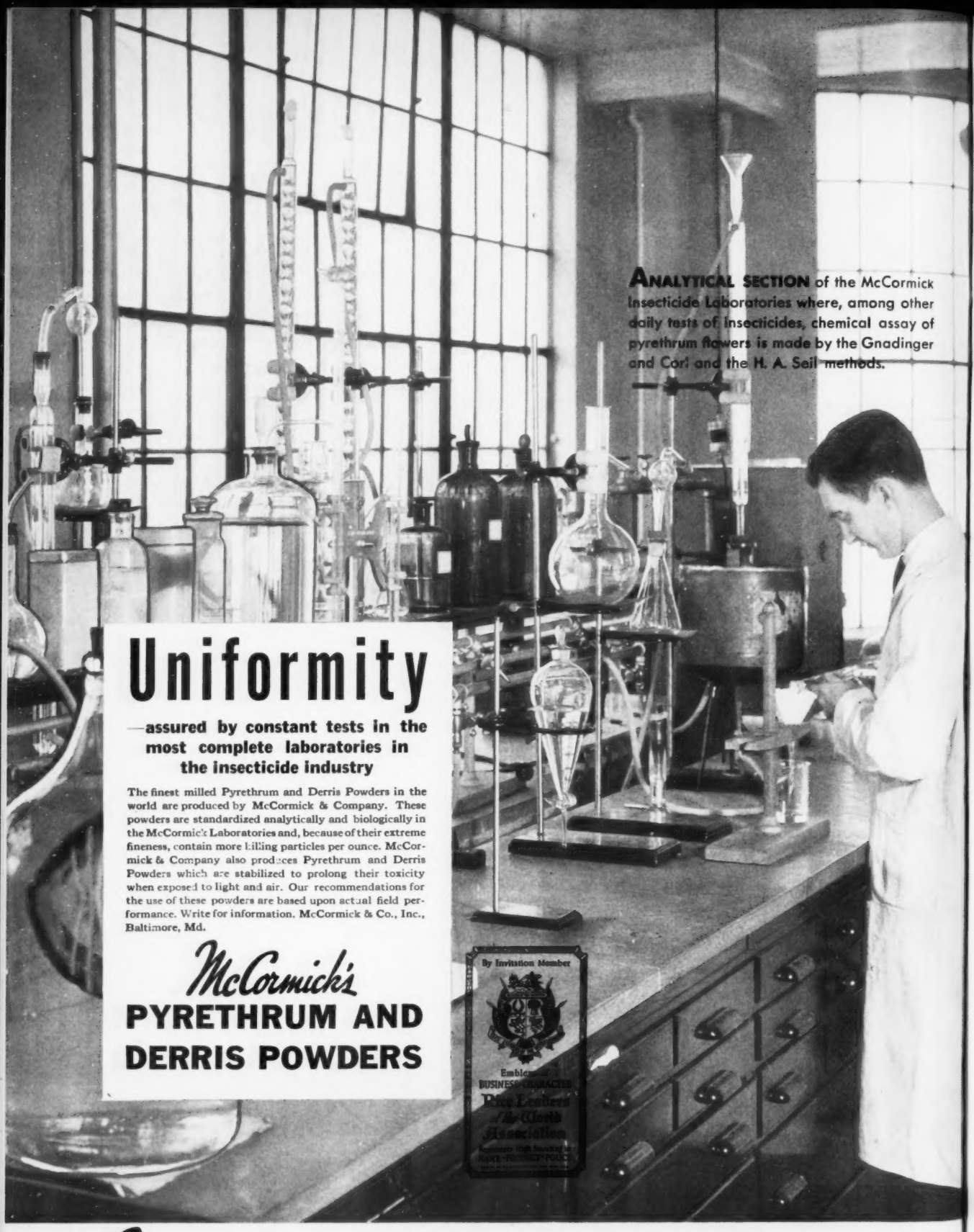

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Even The Last Drop Is Good!

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COAL-TAR—Unadulterated high quality coal tar disinfectants, uniform, easily diluted and agreeable in odor. Do not deteriorate with age. Can supply any strength in any quantity from a pint can to a tank car. Rigid laboratory control guarantees consumer satisfaction.

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SANITARY PRODUCTS

A Section of SOAP

Official Publication, Nat'l. Assn. of Insecticide & Disinfectant Manufacturers

THE habit of inspectors of the Food & Drug Administration of calling on manufacturers and requesting permission to examine a list of customers, arouses the anger of some manufacturers. However, it seems that in order not to appear to oppose the efforts of the Administration to enforce the law, and possibly have this fact reported to Washington by the inspector, the manufacturers hide their anger and comply with the requests. There has been much discussion of this practice, but for fear that they will become "marked men," manufacturers hesitate to come right out in the open and fight it.

First of all, inspectors have no right to examine the books of any manufacturer. They can do so only with the consent of the manufacturer,—that is unless there is litigation and they secure a court order. This point, the inspectors should make absolutely clear when they visit a manufacturer's office. However, they do not do so, and in this regard, they are at fault. Then, in addition, what right have they to request that a manufacturer supply them with evidence which may be used against the manufacturer or his customers? We must admit that it is a trifle nervy,—not to mention illegal where they do not indicate clearly to the manufacturer his rights when they display their badges as officers of the Government.

Of course, the Food & Drug Administration maintains that if there is no breach of the law, there is no reason why a manufacturer should want to keep anything a secret. Why should not the honest manufacturer aid the Government in tracking down the crooked dealers who are injuring the manufacturer's own business? The answers to these questions are quite obvious. However there are several other reasons involved which must be considered,—all of which have to do with the keen competition within the disinfectant and insecticide industries.

It is about time that a committee of the industry tried to settle this matter once and for all at some kind of a conference with Washington. There are level heads in Washington who appreciate the manufacturer's problems. The matter should be placed before them without further delay.

A LAW suit involving two manufacturers of water-waxes is pending in the New York courts, the eventual decision on which will have important consequences for manufacturers of these products. The point at issue is the use of the words "No-Rub" in describing these waxes. The plaintiff has registered these words as a trade name as far back as March 10, 1925, and charges that the general adoption of this designation for their products by others in the industry is an attempt to trade on the good-will built up for a particular brand by advertising over a long period. The defendant, on the other hand, holds that there is nothing original, fanciful, unusual or distinctive in the words "no rub" or in the use of the words as a trademark; in short, that the words are not the proper subject of a technical trademark. Whether or not a trademark should ever have been issued covering these words is a point the courts will eventually have to decide. In the meantime, firms selling products of this type should be awake to the danger of legal back-fire in use of the term "no rub."

Insecticide-Disinfectant Meeting

Penn A. C., Philadelphia, Dec. 7-8

W. B. Eddy
. . . will preside at sessions

Dr. Robert C. White
. . . extends facilities of Penn A. C.

John H. Wright
. . . general convention chairman

H. W. Hamilton
. . . arranged the program

A. L. van Ameringen
. . . in charge of entertainment

LEAVING New York City for the first time in years, members of the National Association of Insecticide and Disinfectant Manufacturers will meet at the Penn Athletic Club, Philadelphia, December 7 and 8, for their twenty-third annual meeting. The facilities of the Penn Athletic Club have been made available through the courtesy of Dr. Robert C. White who is acting as a special member of the convention committee, assisting the various committee chairmen and coordinating their efforts. Those attending the convention will enjoy all the privileges of guest membership in the Penn A. C., including use of the gymnasium, swimming pool, handball courts, health baths, etc.

Reservations for convention accommodations may be made through the association office, 122 East 42nd St., New York, or direct with the club, care Robert Alexander Low, Penn Athletic Club, Philadelphia. We are advised that all available suites in the Penn A. C. have already been reserved, although suites are still available in the Warwick Hotel which adjoins the club. Rooms are still available at the Penn A. C. at rates ranging up from $2.50 single and $5.00 double.

Although the general convention sessions will not begin until the morning of Monday, December 7, many of those attending the convention have planned to arrive in Philadelphia on Sunday, December 6. The regular yearly meeting of the Board of Governors will be held Sunday evening at the Penn A. C. and there will also be several committee meetings that day to make final preparations for the convention. John Wright, secretary of the association, is general convention chairman; H. W. Hamilton, chairman of the program committee; John Powell, chairman of arrangements and finances; A. L. van Ameringen, chairman of entertainment, and Ira P. MacNair, publicity chairman.

A program embracing technical, legislative and commercial subjects has been prepared by the program committee, with an imposing list of speakers both from within and without the association membership. Of particular interest will be the reports of the two committees on specifications for and standardization of insecticides and disinfectants. It was at last year's meeting in New York that the recent drive toward standardization got under way, and it is expected that at the Philadelphia meeting further progress will be made toward setting up a complete set of standards for the industry. New proposed specifications for disinfectants, drawn up following the Chicago meeting last June, have been under consideration by the membership since that time. It is expected that J. L. Brenn, chairman of the committee on disinfectant standardization, will ask for action on these proposed standards in his report at Philadelphia.

With the present wave of activity on the part of the U. S. Federal Trade Commission and the U. S. Department of Agriculture in checking up and taking action against improperly labeled or advertised products in the sanitary products field, the Labeling Clinic scheduled for the afternoon session of the second day, will be a particularly timely addition to the program. It will be in charge of Dr. Griffin, U. S. Department of Agriculture, Washington, D. C. Another government representative at the meeting will be Dr. Alvin J. Cox, chief of the division of chemistry, California Department of Agriculture, who will speak on "The California Economic Poisons Act as Applied to Insecticides and Disinfectants."

The Robinson-Patman Amendment to the Clayton Act,

Complete club facilities will be available at the Penn A. C., including swimming pool, billiard room, gymnasium, handball and squash courts, health baths, etc.

which is currently the subject for so much discussion by business men in all lines, will form the topic for another address. James F. Hoge, general counsel of the Proprietary Association, will speak on "The Robinson-Patman Act—Its Complications and Implications."

During the convention, group luncheons will be served each day at the Penn Athletic Club. At the close of the business sessions on Tuesday, the annual informal dinner will be held at the club and will be followed by a floor show.

The following complete program for the convention, which is reported to be practically in final form, has been issued by the office of the secretary:

23rd ANNUAL MEETING

PENN ATHLETIC CLUB PHILADELPHIA, PA.

Monday A.M.—Dec. 7th

Registration.
Meeting called to order—Pres. W. B. Eddy, Rochester Germicide Co., Rochester, N. Y.
A Welcome to Philadelphia and the Penn Athletic Club—Dr. Robert C. White, Robert C. White Co., Philadelphia.
Announcements.
"The Harmony That Was Belgium"—W. B. Eddy, president.
Legislation—John Wright, secretary.
Report of the Treasurer—John Powell, John Powell & Co., New York.
Roll Call.
Report of the Committee on time and place of the June Meeting—H. W. Hamilton, White Tar Co., Kearny, N. J.
Report of the Entertainment Committee—A. L. van Ameringen, van Ameringen-Haebler, Inc., New York.
Report of the Committee on Sanitary Specialties—C. L. Weirick, C. B. Dolge Co., Westport, Conn.
Publicity—Ira P. MacNair, MacNair-Dorland Co., New York.
Introduction of Guests.
Report of the Membership Committee—Russell H. Young, Davies-Young Soap Co., Dayton, O.
Luncheon.

Monday—P.M.—Dec. 7th

Meeting called to order.
Announcements.
Report of Special Committee.
Report of the National Councillor to the U. S. Chamber of Commerce—C. P. McCormick, McCormick & Co., Baltimore.
Address by S. Davis Wilson, Mayor of Philadelphia.
"Robinson-Patman Act—Its Complications and Implications"—James F. Hoge, general counsel, Proprietary Association.
General meeting adjourned.
Meetings of Committees at places to be announced.

Tuesday A.M.—Dec. 8th

Meeting called to order.
Announcements.
"Should the Phenol Coefficient Method Be Used for Testing Antiseptics?"—Dr. G. F. Reddish, Lambert Pharmacal Co., St. Louis.
"The Correct Technique for Running the Peet-Grady Test"—A. G. Grady, Sinclair Refining Co., East Chicago, Ind.
"The California Economic Poisons Act as Applied to Insecticides and Disinfectants"—Dr. Alvin J. Cox, Chief, Division of Chemistry, Dept. of Agriculture, California.
"1937, What?"—W. G. Griesemer, Black Flag Co., Baltimore.
Report of the Insecticide Specification and Standardization Committee—Wallace Thomas, Gulf Refining Co., Pittsburgh.

(*Turn to Page* 117)

Some Comments on PYRETHRUM ANALYSIS

By Dr. Jean Ripert*

IN spite of the work carried on by several authors and ourselves on the analysis of pyrethrum, there still remain pending some unsettled questions to which we have already drawn attention. When the active constituents of pyrethrum powders or any other solid or powdered substance such as agricultural insecticidal powders are to be analyzed, the pyrethrins should first be extracted and the extracted substance then analyzed, after evaporation of the solvent, by any of the current methods. Petroleum ether has generally been selected for this purpose and all foreign works specify that the flowers are analyzed after being washed for 8 hours in a Soxhlet with petroleum ether, density 0.650.

The use of such solvent in the laboratory contrasts with the industrial practice which, for the sake of convenience makes use of alcohol, acetone or sulfuric ether and sometimes, kerosene or chlorinated derivatives. It should, therefore, be interesting to ascertain whether the industrial extraction would give, upon analysis, the same results as the extraction, such as performed in the laboratory, which is used as a basis for commercial transactions.

The use of petroleum ether dates back to the work of Staudinger and Ruzicka who, when in attempting to discover the structure of pyrethrins, rightly employed petroleum ether which gives less colored extracts and with a higher pyrethrin content than is the case with extracts obtained with other solvents. The petroleum ether crude extract for 1 kg. of flowers amounts to 50 gr., while the chloroform or trichlorethylene extract amounts to 100 gr. The former's pyrethrin content will, therefore, be, for instance, 20 per cent and the latter will only be 12 per cent. Briefly, in a research made with a view to purifying and obtaining pure pyrethrins, it is altogether logical to use petroleum ether, while, from an analytical and industrial standpoint, it is of first importance to carry on a total extraction.

This method of extracting with petroleum ether was supported by the works of Gnadinger[3] who believed that one of the essential properties of pyrethrins was their solubility in this solvent. He indicated that their measurement could be accomplished by observing the degree of solubility. Such an assertion was afterwards recognized as being inaccurate. La Forge and Haller's researches [1] and ours [2] have made evident the very slight solubility of pyrethrin II.

On the other hand, it does not seem right to consider definite solubilities for total plant extracts. A crude extract's solubility depends on the solubility of its constituents in the presence of each other. Thus, those specially engaged in extracting jasmine flowers or others with petroleum ether, are perfectly aware of the fact that the total extract, i. e. the concrete, is no longer soluble in petroleum ether after the cooling treatment which has fractionated out certain constituents. For instance, a petroleum ether crude extract, evaporated in vacuo, is taken up with alcohol in the same flask before oxidation by air can take place. Glycerides and fatty acids deposit in this flask when brought to a temperature of —2° or —3° for a few hours. This alcoholic solution, filtered and evaporated in vacuo, gives a residue which is now only partially soluble in petroleum ether, leaving an important resinous substance which was, indeed, quite soluble in the presence of the fats.

Pyrethrum extraction is rendered still more complicated in view of the fact that it is performed on flowers a few months old while that of jasmine and rose applies to fresh flowers. During storage, some important changes occur in the pyrethrum flowers, chiefly the oxidation of the fatty acids changed into oxyacids insoluble in petroleum ether. In pyrethrum flower tissues, the structure of the cell content is altered and the pyrethrins, perfectly soluble in glycerides and fatty acids, are covered with the latter which will show themselves as vesicles surrounded by an oxyacid film difficultly soluble in petroleum ether.

In our work[4], it can be noticed (page 51, table 7) that, in the course of three months' storage, an appreciable decrease in the content of petroleum ether extracted pyrethrins has already happened. Such pyrethrins are found again in the sulfuric ether extract, the dissolving power of the latter solvent being higher than that of petroleum ether. We have again checked up this year these differences of extraction on 1935 crop flowers now 10 months old.

Table I shows that the total pyrethrin content, as estimated through Ripert's Method, amounts to 7.9 in the petroleum ether extract and to 11.9 in the chloroform extract. The difference applies particularly to pyrethrin II, the content of which is 4.3 in the petroleum ether as against 7 in the chloroform extract, while pyrethrin I varies from 3.6 to 4.9.

According to a principle which we already mentioned, after extracting with petroleum ether, we dried the ex-

* Translated from Sur les méthodes d'analyses chimigues du Pyréthre for SOAP by Dr. Ripert.

tracted pyrethrum contained in the Soxhlet and washed it again with chloroform. As will be seen from the table, this chloroformic extract still titrates 1.28 pyrethrin I, 2.21 pyrethrin II, giving 3.49 total pyrethrins. When adding both successive extractions, we find out that the pyrethrin content is very much the same as when extracting directly with chloroform.

We have also checked that the chloroform extract, made after the petroleum ether extraction, which possessed a high pyrethrin content, was also highly toxic. In this connection, we dissolved this extract again in absolute ethyl alcohol and determined the pyrethrins by means of the Sankowsky and Jernakoff biological method on flies in the conditions specified[5]. It seems then to have been perfectly demonstrated that petroleum ether extraction on dried pyrethrum flowers a few months old does not extract the total amount of pyrethrins.

During these investigations, we noticed a curious body which oxidized very rapidly and also contributed in causing the pyrethrins to be insoluble in petroleum ether. On trichlorethylene crude extracts, we succeeded in isolating, through precipitating with acetone and alcohol, decolorizing, and purifying with benzine, a rubber-like substance which had the same properties as those extracted from other plants belonging to the Compound family like, for instance, guayul.

The difficulty in the preservation of pyrethrum extract solutions in petroleum is due largely to the presence of this rubber substance which swells in petroleum ether or kerosene. In fact, this kerosene swollen rubber, forming large micelles, is changed and polymerized under the influence of light. It then deposits on the sides of the glass bottles, carrying with it a certain quantity of pyrethrins. We would also mention here that the phytosterol, which is abundantly present in pyrethrum, is altered under the action of light to a point where it precipitates in kerosene. The discoloration, through light exposure, of numerous insecticides not stabilized by anti-oxidizing agents, is due to such depositing.

A Comparison of Analytical Methods

AMONG the analytical methods suggested for the examination of pyrethrum powders as well as of pyrethrin-containing commercial and industrial products, only those based upon the properties of the pyrethric acids can now be considered from a general standpoint. Of these, Seil's Method cannot be applied to all products which may contain pyrethrins like sulfonated fatty alcohol insecticides for agricultural purposes.

In the United States[6] a new method of titration of pyrethrin II only in petroleum ether extracted flowers has been worked out by Haller and Fred Acree.

It is known that pyrethrin II which is the ether of the dicarboxylic chrysanthemum acid and pyrethrolon, shows a methoxyl group fixed on the second acid function of the dicarboxylic chrysanthemum acid. Considering that on petroleum ether extracts, there could be other than pyrethrins, no other product likely to contain methoxyl, these authors carried out a direct titration of the methoxyl group on the petroleum ether crude extract through Zeisel's modified method. If one compares this method with that of Seil, one sees that they obtained similar though always lower results. If, for example, Seil's method shows a content of 0.54, the methoxyl one gives 0.38.

Gnadinger discussed such results[7] and he agreed that Seil's Method would give results higher than his (Fehling). On the other hand, Haller and La Forge who prepared pyrethrin II through cathodic vacuum distillation, found out that the methoxyl content was identical to that derived from the formula given by Staudinger and Ruzicka. They, nevertheless, observed that the percentage value of products titrating 80 per cent pyrethrin II through the methoxyl method, was 5-6 per cent higher by using Seil's Method.

On a pyrethrin II obtained with a method quite different from the Haller and La Forge's one, we found [1] a methoxyl content 10 per cent and even, in certain cases, 25 per cent lower on concentrates containing 95 per cent pyrethrin II. It is only after several fractionated precipitations at a temperature of —50° in butane that we obtained a pyrethrin II showing the theoretical methoxyl content.

From our investigations now in course it would seem that pyrethrin II is possibly not always methylated and much work is still to be done to clear up this matter.

Pure pyrethrins prepared by the method of Andre Girard and Georges Sandulesco, i.e. with trimethylacetylhydrazid ammonium when starting from concentrates containing 100 gr. total pyrethrins per kg., have shown an important difference in the methoxyl content, which confirms that pyrethrin II would not be identical to that described by Haller and La Forge.

Gnadinger[7] discussing Haller and Acree's work, writes that the pyrethrin II content, as determined by Seil's Method, was about 30 per cent higher than what was found with the methoxyl method, while, through their reduction method, they would obtain a result 15 per cent lower than with Seil's.

This summary shows that the problem is not clear, this owing to the fact that things are compared that are not comparable. In fact, Gnadinger starts from industrial extracts, Haller and Acree from pyrethrum flowers extracted solely with petroleum ether. The former titrates the total pyrethrins through reduction. The other one, through methoxyl, titrates only pyrethrin II. The third one titrates the two pyrethrins separately without examining which bodies are likely to interfere with their free acidity. Nevertheless, in order to try to clear up this question, we compared four estimation methods based upon well known reactions:

1—the acids' properties
2—the formation of semicarbazon
3—the methoxyl content.

For this analysis we used flowers cropped in June 1935 at No. 5 cutting stadium[4]. These flowers were

finely ground, two lots were made, one of which was extracted with petroleum ether, the other with chloroform. The petroleum ether extracted lot was, as stated before, extracted another time with chloroform. These three extracts were filled up to a determined volume and aliquot parts of liquid were taken to make the various analyses. We were thus certain of similar products on which to work. Table I summarizes the results.

Comparative Analyses of Pyrethrum Flowers

Choice of Solvent—Methods of Analysis

Solvent	Seil Method						Ripert Method			Semi-carba-zone Method	Meth-oxyl Method
	Without neutralization			With neutralization							
	Pyrethrins			Pyrethrins			Pyrethrins			Total Pyreth-rins	Pyreth-rin II
	I	II	Total	I	II	Total	I	II	Total		
Petroleum ether.....	3.2	5.2	8.4	3.2	4.61	7.81	3.6	4.3	7.9	9.4	5.1
Chloroform.....	4.5	8.9	13.4	4.29	7.04	11.33	4.9	7	11.9	13.2	9.8
Chloroform after petroleum ether....	1.37	4.21	5.58	1	2.85	3.85	1.28	2.21	3.49	4.2	4.49

THE semicarbazon method was operated in a somewhat unusual manner which we will describe briefly. From the extract to be analyzed the solvent is driven away in vacuo, the residue is taken up with pure absolute ethyl alcohol to which a sufficient quantity of semicarbazid has been added. After 36 hours contact at a temperature of 30°, the alcohol is driven away in vacuo, the residue taken up with chloroform which is several times water washed to eliminate the uncombined semicarbazid. The chloroform is evaporated to dryness to constant weight after passing over sodium sulfate. On the crude extract thus obtained, the nitrogen is titrated through Pregl's method (Dumas Micro) and the total pyrethrin content is calculated by taking as molecular weight the average molecular weight between pyrethrin I and pyrethrin II.

This method which we have been using for eight years has enabled us to check in extracts that there were only traces of nitrogen other than that brought by the semicarbazid. It always gave us results higher[4] than those obtained with the acid methods. Regarding the Seil Method (See the table's first columns) we used it first according to the author's process, then previously neutralizing the extracts in the same manner as with our method.

The examination of the analytical figures show that:

1—With petroleum ether extraction, Ripert's Method gives, for pyrethrin I, somewhat higher results; this is due to the fact that the monocarboxylic chrysanthemum acid is more completely carried away than with Seil's process.

2—The pyrethrin II content, with Seil's Method, amounts to 5.2 without neutralization; it reaches 4.6 after neutralization while with our method, it amounts to 4.3. The action on the pyrethrin II content of the presence of the free acids eliminated by previous neutralization, is clearly seen here[4]. Briefly the results of Seil's Method with neutralization are, for total pyrethrins, very close to ours.

The examination of the results of the extraction with chloroform shows that Seil's Method, with or without neutralization, as well as ours permit of an increase in pyrethrin I content which, from 3.6 as given by the petroleum ether extraction, reaches 4.9 and pyrethrin II content which, from 4.3 amounts to 7. The total pyrethrin content is thus 11.9 as against 7.9.

Upon comparing the results of the semicarbazon method on both extracts, the increase is parallel and always gives higher figures. From 9.4 the content amounts to 13.2.

The methoxyl method which, for the petroleum ether extract, shows 5.1 content, gives for the chloroformic extract 9.8. And here we get a very curious result—contrary to what was mentioned by Haller and La Forge, Haller and Acree: the pyrethrin II content of the petroleum ether extract is greater than when acid methods are used since it amounts to 5.1 instead of 4.3. But, if compared with Seil's Method without neutralization, it is in perfect agreement with the latter as it amounts to 5.2 instead of 5.1. However, where the results are deceitful is when this method is applied to chloroformic extracts. The pyrethrin II content is 9.8 while Seil's Method allows getting 8.9 and ours 7. There are, therefore, methoxyl-containing bodies in the plant which interfere with the analytical results derived from Haller & Acree's method. We believe that such bodies are methyl ethers of the pyrethric acids and the pyrethrolon, the presence of which we have already mentioned elsewhere.

It is now interesting to examine the analytical results

obtained on the chloroform extract following the petroleum ether extraction. In this chloroform extract we find again by using the various methods, the pyrethrins and interfering bodies. And the addition of the results of the petroleum ether extraction and of the chloroform extraction enables one to remark that the agreement with the results achieved, thanks to the chloroform direct extraction, is perfect. Owing to the evidence set forth by the table figures, we think it unnecessary to go further into the matter.

The conclusion of this examination is that one should be extremely cautious whenever analytical results on plant extracts are intended to be made general. The first condition is to make a total extraction of the products to be estimated, even should such extracting process complicate the analytical work. It is, indeed, very much easier to work on petroleum ether extracts than on clorinated derivative extracts.

We are busy this year analyzing newly gathered flowers and our first results confirm what we have stated in our various publications. The petroleum ether extraction, carried out on dried flowers a few days after the crop is brought in, gives figures very near those obtained with the chloroform or sulfuric ether extraction. The reactions which occur in plant tissues during storage are extremely rapid, however. In the case of pyrethrins, although such reactions do not greatly decrease their toxicity within a few months, the fact that they do affect their physical form or aggregate, the complex in which they exist in the cell, makes them less soluble in hydrocarbons.

It is worth while referring here to the work performed by Dr. Moises Margulis of Buenos Aires who compared, on a number of commercial insecticidal products, the four analytical methods: Wolmar, Seil, Ripert and Tattersfield. He concludes that ours gives more stable results and that previous neutralization is absolutely necessary if one wishes to have a genuine idea as to the pyrethrin content of such products.

Analysis of Perfumed Insecticides

A BRIEF work by J. J. T. Graham[8] published by *Industrial and Engineering Chemistry* under date of May 15, 1936, shows that there would be a 25 per cent loss in total pyrethrins when, with Seil's Method, perfume is steam distilled off prior to carrying on the analysis in the usual manner. Although this author apparently did not try our method, he states that we also drive off the perfume before analyzing. "This pyrethrin loss would be ascribed to vapor volatilization, decomposition or any other chemical change in the pyrethrins", he says. Such an assertion astonished us so much the more since we never noticed such a result when the analysis of perfumed products is carried out as indicated on page 19, b [9]. We would say literally: "For a petroleum extract such as a product to be sprayed on flies, if the product is perfumed, pour out in a 1 litre capacity flask 500 cc. of liquid, add 200 cc. of water and distill these 200 cc. of water or more, if necessary, adding water as long as the product has a strong smell". Under such conditions we never noticed any loss.

In order to make this controversial point very clear, we again started Graham's experiments, but on 500 cc. instead of 100 cc. of insecticide. Distillation was carried out in a 2 litre capacity pyrex receiver (No. 5—round bottom), the delivery tube connected with the condenser having a 13 m/m interior diameter. We poured out in the flask 500 cc. of insecticide and 700 cc. of boiling water as well as a few pieces of pumice.

The insecticide was prepared by dissolving a pyrethrum concentrate in kerosene. This kerosene showed the following constants:

Luchaire Flash point	60°
Evaporation residue	None

This evaporation trial was made in evaporating 5 cc. in a 60 m/m diameter crystallizing dish placed for six hours in a Wissnegg drying stove at a temperature of 120°.

Distillation end of this petroleum	240°
Acidity	None
Density	0.804

The flask was heated through a metal cloth on which we had placed a sheet iron plate bearing a hole 5 cm. in diameter, this for protection against lateral overheating. The time required for distilling 600 cc. of water was 1 hour and 5 minutes. In a second experiment we distilled 1,500 cc. in 2 hours and 30 minutes.

For the analysis, the flask containing the petroleum and remaining water was cooled and its content poured out in a separating bulb. The flask was rinsed several times with sulfuric ether which was also poured out in this bulb. The mixture was then neutralized, as is the procedure in ordinary analysis, the water decanted, rinsed with sulfuric ether and the insecticide, thus free from its perfume, was, after the ether's evaporation, saponified according to the general method.

Table II which gives the result of these analyses shows that there has been no great change in the pyrethrin content and that differences such as 0.62 - 0.59 can be accounted for by the inaccuracies of the analytical method. We can therefore assert that by analyzing 500 cc. of insecticidal product, there is hardly any pyrethrin loss during the water distillation.

With a view to understanding how Graham obtained, with Seil's Method, such results, we distilled, under the same conditions as mentioned above, only 5 cc. of concentrate made with the same petroleum but containing about 100 gr. pyrethrins to the litre. We first distilled in a 500 cc., then in a 1 litre, finishing with a 2 litre capacity flask. We proceeded first with 250 cc. and, in the two other flasks, with 1 litre. We consider that 1 litre distilled water for 5 cc. of concentrate is a quantity ten times bigger than that used by Graham. Under these conditions, which are the worst that could be met with, there should be a huge loss. The process was the same as indicated above but care was taken to rinse

the distilling flask properly as well as the distillate receiver.

Table II's second part shows the results of these analysis on the concentrate and we see that after 1 hour and 10 minutes of boiling, by distilling .250 cc. which is a quantity sufficient for all current concentrates, the pyrethrin loss is very small; since from 57.46 it goes down only to 55.47. By slowly distilling 1 litre of water in a 1 litre capacity flask, the loss of 4.5 per cent applies almost totally to pyrethrin 1; by distilling (experiment 4)—1 litre in a 2 litre capacity flask and going to the end of such distillation, there was after treatment only 75 cc. of water left in the flask. The loss amounts to 17 per cent and applies still almost solely to pyrethrin I. We are consequently far from the results achieved by Graham and we assert that in order to reach such a pyrethrin loss, particular conditions that are never encountered when analyzing commercial products, are absolutely necessary.

As a matter of reference, we would say that in the case of insecticides, the distilled petroleum is white, while, with concentrates, it is green. One can conclude therefrom that the concentrate is mechanically driven away during the water vaporization. On the other hand, it may be that during such long boiling, decomposition takes place which does not surprise us. It is to be noted that decomposition does not occur in the case of insecticides with 500 cc. of petroleum.

Effect of Vaporization on Dilute and Concentrated Insecticides

Ripert Method of Analysis

	Experiment No.	INSECTICIDES 1	2	3	CONCENTRATES 4	5	6	7
	Volume of insecticide used	500	500	500	5	5	5	5
	Volume of water vapor distilled	"	600	1500	"	250	1000	1000
	Length of distillation		1 hr. & 5 min.	2½ hours		1 hr. & 10min. 500 cc. flask	1 hr. & 40min. 1 liter flask	1 hr. & 40min. 2 liter flask
Analysis of insecticide remaining in flask	Volume of N/50 NaOH necessary for neutralization in cc.	75	74.5	73	54	64	58.5	53.5
	Total acidity in cc. N/50 NaOH	74	73	71	67	65	65	57
	Volatile acids in petroleum ether in cc. N/50 NaOH	23.5	23.5	22	22	21	19	15.5
	Volatile acids in water in cc. N/50 NaOH	8	7	9.5	7	8	9	5
	Pyrethrin I	0.31	0.31	0.29	29.04	27.72	25.08	20.46
	Pyrethrin II	0.31	0.31	0.31	28.42	27.67	27.67	27.30
	Total Pyrethrins	0.62	0.62	0.60	57.46	55.30	52.75	47.76
Analysis of components vaporized	Volume of petroleum distilled		130	245				
	Volume of N/50 NaOH necessary for neutralization in cc. (petroleum and water)		15	15		7.1	15.5	8.2
	Total acidity in cc. N/50 NaOH		3	4.5		4	12	9
	Volatile acids in petroleum ether in cc. N/50 NaOH		0.4	1		1.2	3.5	2
	Volatile acids in water in cc. N/50 NaOH		1.5	1		1.2	3	2
	Pyrethrin I		0.003	0.013		1.58	4.62	2.64
	Pyrethrin II		0.009	0.019		1.19	4.11	3.74
	Total Pyrethrins		0.012	0.032		2.77	8.73	6.38

These results lead us to wonder what would have been Graham's results had he followed our method which prevents all emulsions which have interfered with him as he mentions when applying Seil's Method.

Here again we would draw the attention of those using these methods to the importance of carrying out their analysis on fairly large quantities of liquid and not to be satisfied with such results as obtained by titrating with 4 or 5 cc. of sodium n/50.

In the analysis of the water distilled insecticidal parts—Table II's right column,—it is noticed that for pyrethrin I, the figures for NaOH n/50 are 0.3 - 0.4 and 1.0, such figures being really too low and near the method's relative error. It is necessary to work with at least 20 cc.

(*Turn to Page* 113)

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A Supplementary Test for DISINFECTANTS

By Dr. Emil Klarmann and V. A. Shternov*

Lehn & Fink, Inc.

ALTHOUGH it has been customary for many years to describe the potency of germicides in terms of phenol coefficients, nevertheless it is not at all unusual to find that this term is still being used with an incomplete realization of its significance. It is overlooked that when used without any other qualifications, it refers to one microorganism only, *B. typhosus*. It is assumed, often by erroneous implication, that the germicidal effect upon other pathogenic microorganisms corresponds to that upon *B. typhosus*—i. e., that a disinfectant with a phenol coefficient of 10 for instance, is ten times more potent than phenol, not only with respect to *B. typhosus*, but to all other pathogenic microorganisms as well.

There exist certain quantitative relationships in the effects of a number of germicides upon different pathogenic microorganisms, of such a character that from the observed action upon *B. typhosus* it is possible to draw a conclusion concerning the probable action upon other microorganisms; but there are other instances in which any such relation is completely lacking. The following discussion will be limited to disinfectants of coal-tar origin, because the statement of germicidal potency in terms of phenol coefficient is, or should be, restricted to this class of products, by a more or less common agreement.

It is not intended to give a detailed review of preceding publications which deal with the limitations involved in any attempted interpretation of the germicidal potency of disinfectants on the basis of their *B. typhosus* phenol coefficients alone (*2*, *6*). However, considerable study has been devoted to this subject by previous investigators.

Although the term "coal-tar disinfectants" is often used in a general sense, it is important to remember that there are two different groups of products falling under this classification, each with very definite characteristics —viz., the cresylic and the tar-oil groups. The former comprises preparations containing as active principle phenol derivatives of low molecular weight, such as the isomeric cresols and xylenols; the cresol compound of the U. S. Pharmacopoeia is the outstanding example of this class. The products of the latter group contain, in addition to phenolic constituents, varying proportions of coal-tar hydrocarbons, mostly mono- and dimethylnaphthalenes, which are derived from the so-called neutral oil. Soaps made from vegetable oils or resins form an essential part of the formulas of both groups, their miscibility with water being due to the presence of soap. Physically, the two classes may be distinguished by the appearance of their mixtures with water; in low concentrations, the cresylic disinfectants form practically clear aqueous solutions, while those of the tar-oil group show a milky turbidity.

Germicidal Action of Phenol Homologs

BEFORE discussing the relationship between the composition of the various technical coal-tar disinfectants and their action upon different pathogenic microorganisms, it is well to consider the pertinent conditions obtaining in the case of definite phenol homologs. Table I gives the quantitative results obtained with *B. typhosus*, *Staphylococcus aureus*, *Mycobacterium tuberculosis* (*hom.*), and *Monilia albicans* (*3*). The consideration of the minimum germicidal concentrations and of the phenol coefficients calculated therefrom discloses that in this series the germicidal potency with regard to all four test organisms increases with the increasing molecular weight until the amyl derivative is reached; beginning with this point, the further increase of the molecular weight produces a very considerable increase of the germicidal action upon *Staphylococcus aureus*, *Mycobacterium tuberculosis* (*hom.*), and *Monilia albicans*, while with respect to *B. typhosus* their effect drops, becoming rather indefinite in the case of the heptylphenol, which nevertheless shows considerable efficacy against the other three test organisms. The figures indicate that in the case of the compounds up to and including butylphenol, the *B. typhosus* phenol coefficient might serve as a reasonably accurate index of germicidal potency, since a compound which is, for example, 2, 6, 18, or 45 times, respectively, more effective than phenol against *B. typhosus*, is also approximately as many times more effective against the other vegetative microorganisms. However, beginning with the amyl compound, this relation ceases to exist; in this case, as well as in that of the higher homologs, the *B. typhosus* phenol coefficient is no longer an index of the general germicidal efficacy.

While it is not claimed, of course, that all the normal alkylphenols listed in Table I occur in coal-tar disinfectants or in disinfectants made from tar acids, the condi-

* Industrial and Engineering Chemistry, Analytical Edition, Vol. 8, No. 5, 369-72.

tions found in this series of homologous phenol derivatives are referred to in order to demonstrate the existence of certain functional relationships between the chemical constitution and germicidal action. However, attention is called to the results obtained with the pure cresols and xylenols (methyl and dimethyl phenols) given in Table I and also in Table II in which the parallelism in the germicidal effects upon different microorganisms is distinctly evident. These results are significant, particularly because cresols and xylenols occur in the usual run of coal-tar disinfectants. (The experimental conditions of the tests described in Tables I and II differ, in that in the former case the temperature at which the culture was exposed to the action of the disinfectant solution was 37° C., in the latter 20° C.)

It may be mentioned in passing that the term "quasi-pecific" has been proposed previously by the authors to describe the effect such as that shown by *n*-heptylphenol which is extremely active against *Staphylococcus aureus* and yet little effective against *B. typhosus*.

In applying these findings to the usual variety of cresylic disinfectants, which as a rule contain the cresol and xylenol isomers, the *B. typhosus* phenol coefficient may be expected to give a reasonable idea of their general germicidal potency. This is borne out by the results obtained with certain commercial cresylic disinfectants of different germicidal strengths listed in the first part of Table III.

Table III gives in its second part the results obtained with six commercial tar-oil disinfectants, and here the picture is entirely different. Although the preparations are listed in the order of their *B. typhosus* phenol coefficient, beginning with the lowest figure, there is no regularity in the relationship between the *B. typhosus* phenol coefficient and the phenol coefficients obtained with the other microorganisms. By way of comparison with the disinfectants of the cresylic group, where the ratio of the *B. typhosus* and *Streptococcus* phenol coefficients, for example, is not in excess of approximately 2 to 1 for any given product, in the tar-oil group there occur such ratios as 8 to 1 or even 20 to 1.

A comparison of the germicidal effects upon *B. typhosus* and *Streptococcus hemolyticus* of a number of technical tar-oil and cresylic disinfectants was reported recently by Philbrick (*4*). His findings substantiate the contention that the *B. typhosus* phenol coefficient is unable to furnish an adequate description of the germicidal potency of coal-tar disinfectants. This author lists certain products whose comparatively high *B. typhosus* phenol coefficients of over 3 would conceal the fact that they are from about ten to thirty times less effective against *Streptococcus hemolyticus*, thus tending to misrepresent their germicidal value. Reference is made in this connection also to the very instructive paper by Brewer and Ruehle (*1*) in which a considerable number of similar phenol coefficient relationships (with *B. typhosus* and *Staphylococcus aureus*) are given for both the tar-oil and the cresylic disinfectants.

Neutral Oil in Tar-Oil Disinfectants

THE domestic tar-oil disinfectants contain varying proportions of "neutral oil," consisting mostly of methyl- and dimethylnaphthalenes, besides other hydrocarbons (fluorene, acenaphthene), organic bases (quinoline, pyridine) and their alkyl derivatives, certain oxygenated compounds, organic sulfur compounds, etc. Neutral oil contains practically no phenol or phenol

TABLE I. GERMICIDAL ACTION OF *p*-ALKYLPHENYL DERIVATIVES AT 37° C.

	B. typhosus		*Staph. aureus*		*M. tuberculosis (hom.)*		*Monilia albicans*	
	Concentration[a]	Phenol coefficient	Concentration[a]	Phenol coefficient	Concentration[a]	Phenol coefficient	Concentration[a]	Pheno coefficient
Phenol	1:150–160	1.0	1:70–80	1.0	1:90–100	1.0	1:90–100	1.0
2-Methyl	1:350	2.3	1:160	2.3	1:200	2.0	1:200	2.0
3-Methyl	1:350	2.3	1:160	2.3	1:200	2.0	1:200	2.0
4-Methyl	1:350	2.3	1:160	2.3	1:200	2.0	1:200	2.0
4-Ethyl	1:1000	6.3	1:500	6.3	1:600	6.7	1:700	7.8
2,4-Dimethyl	1:800	5.0	1:350	4.4	1-400	4.0	1:500	5.0
2,5-Dimethyl	1:800	5.0	1:350	4.4	1:400	4.0	1:400	4.0
3,4-Dimethyl	1:800	5.0	1:300	3.8	1:400	4.0	1:400	4.0
2,6-Dimethyl	1:600	3.8	1:350	4.4	1:400	4.0	1:350	3.5
4-*n* Propyl	1:2750	18.3	1:1300	16.3	1:1600	17.8	1:1600	17.8
4-*n* Butyl	1:7000	46.7	1:3500	43.7	1:4000	44.4	1:4000	44.4
4-*n* Amyl	1:8000	53.3	1:10,000	125.0	1:12,000	133.0	1:14,000	156.0
4-*tert*-Amyl	1:4500	30.0	1:7500	93.8	1:10,000	111.1	1:10,000	100.0
4-*n*-Hexyl	1:5000	33.3	1:25,000	313.0	1:35,000	389.0	1:30,000	333.0
4-*n*-Heptyl	(1:2500)	(16.7)	1:50,000	625.0	1:60,000	667.0	1:50,000	556.0

[a] Minimum concentrations effective in 10 minutes.

TABLE II. GERMICIDAL ACTION OF CRESOLS AND XYLENOLS AT 20° C.

	B. typhosus		*B. dysenteriae (Flexner)*		*Staph. aureus*		*Streptococcus (hemol.)*		*M. tuberculosis*		*Trichophyton rosaceum*	
	Concen.[a]	Phenol coeff.	Concen.[a]	Phenol coeff.	Concen.[a]	Phenol coeff.	Concen.[a]	Phenol coeff.	Concen.[a]	Phenol coeff.	Concen.[a]	Phenol coeff.
Phenol	1:80–90	1.0	1:90–100	1.0	1:60	1.0	1:60	1.0	1:60	1.0	1:80	1.0
2-Methyl	1:200	2.5	1:250	2.5	1:130	2.2	1:150	2.5	1:160	2.7	1:160	2.0
3-Methyl	1:200	2.5	1:200	2.0	1:140	2.3	1:140	2.3	1:140	2.3	1:160	2.0
4-Methyl	1:200	2.5	1:200	2.0	1:130	2.2	1:140	2.3	1:140	2.3	1:160	2.0
2,5-Dimethyl	1:400	5.0	1:500	5.5	1:250	4.2	1:250	4.2	1:300	5.0	1:300	3.8
2,4-Dimethyl	1:400	5.0	1:500	5.5	1:250	4.2	1:300	5.0	1:350	5.0	1:350	4.4
3,4-Dimethyl	1:400	5.0	1:500	5.5	1:250	4.2	1:250	4.2	1:300	5.0	1:300	3.8
2,6-Dimethyl	1:400	5.0	1:500	5.5	1:250	4.2	1:300	5.0	1:300	5.0	1:300	3.8

[a] Minimum concentrations effective in 10 minutes.

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derivatives. Obviously, therefore, the antibacterial action of disinfectants containing considerable proportions of neutral oil hydrocarbons cannot be expected to show the functional regularity encountered in the case of phenolic germicides. Few systematic data are available concerning the anti-bacterial properties of neutral oil, or its effect as an admixture to phenolic germicides.

In an effort to obtain further information on this subject, the authors prepared and tested saponaceous (linseed-oil soap) mixtures of U. S. P. cresol with neutral oil containing various proportions of these two constituents. Admittedly, such mixtures are not entirely representative of the composition of the technical tar-oil disinfectants, but there is enough resemblance to justify their use in a systematic investigation of this matter. Table IV lists the results obtained (at 20° C.). It will be noted that an increasing proportion of neutral oil at first brings about an apparent increase in the effect upon *B. typhosus*, the phenol coefficient of the disinfectant mixture consisting of 30 per cent of U. S. P. cresol and 20 per cent of neutral oil, being more than twice that of the preparation containing 50 per cent of U. S. P. cresol. The further increase in the proportion of neutral oil lowers the *B. typhosus* phenol coefficient, although this figure never drops below that of the product with 50 per cent of U. S. P. cresol. Indeed, an emulsion corresponding to a neutral oil content of 50 per cent appears to produce the same effect upon *B. typhosus* as a 50 per cent cresol preparation.

But this effect upon *B. typhosus* is not descriptive of the action upon other test organisms. *B. dysenteriae*, which is related to *B. typhosus*, resembles the latter in its resistance to these mixtures. However, the other test organisms studied—viz., *Streptococcus hemolyticus*, *Mycobacterium tuberculosis*, and *Trichophyton rosaceum*—do not follow the course of *B. typhosus;* here the gradual replacement of U. S. P. cresol by neutral oil causes a gradual decrease in the germicidal potency of such mixtures. Thus, here is another significant instance of the inability of the *B. typhosus* phenol coefficient to describe the general germicidal potency of a disinfectant; the discrepancy between the effects upon *B. typhosus* (and *B. dysenteriae*) on one hand, and upon *Streptococcus*, *Staphylococcus*, *Mycobacterium tuberculosis*, and *Trichophyton rosaceum* on the other, is strongly in evidence, as illustrated, for instance, by a comparison of the effects of the 50 per cent cresol preparation with one containing 10 per cent of cresol and 40 per cent of neutral oil. In the case of the mixture containing neutral oil only, a consideration of the *B. typhosus* phenol coefficient alone might lead one to assume that this mixture has the same germicidal potency as that containing cresol only. Yet the results obtained with the other test organisms disclose the vast germicidal superiority of the cresol mixture.

In order to prove that no other constituents of neutral oil except *a*- and *B*-methylnaphthalene play any significant role in producing this phenomenon, several experiments were run in which these naphthalene derivatives were mixed with U. S. P. cresol, and emulsified in the same manner as the mixtures of cresol and neutral oil. Table V states the experimental results in detail; they appear to agree entirely with those obtained in the case of the cresol-N-neutral oil mixtures dealt with in Table IV, thus showing conclusively that the methylnaphthalenes, which constitute the bulk of neutral oil, are responsible for the apparent quasi-specific enhancement of the germicidal potency of tar-oil disinfectants with respect to *B. typhosus*.

By way of interest, Table V gives also the results

TABLE III. GERMICIDAL ACTION OF CERTAIN CRESYLIC AND TAR-OIL DISINFECTANTS

Temperature 20° C.

	B. typhosus		*B. dysenteriae* (*Flexner*)		*Streptococcus* (*hemol.*)		*Staph. aureus*		*M. tuberculosis* (*hom.*)		*Trichophyton rosaceum*	
	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.
Cresol compound, U. S. P.	1:200	2.3	1:200	2.2	1:100	1.4	1:100	1.6	1:140	2.3	1:70	1.0
Cresylic disinfectant I	1:300	3.8	1:400	4.4	1:180	2.6	1:120	2.4	1:200	3.3	1:160	2.3
Cresylic disinfectant II	1:500	5.5	1:500	5.5	1:200	2.9	1:180	3.0	1:300	5.0	1:300	4.3
Tar-oil disinfectant I	1:300	2.8	1:350	3.9	1:50	0.7	1:40	0.7	1:400	2.3	1:35	0.5
Tar-oil disinfectant II	1:600	6.7	1:600	6.7	1:25	0.4	1:25	0.4	1:160	2.7	1:40	0.5
Tar-oil disinfectant III	1:700	7.8	1:500	5.5	1:25	0.4	1:25	0.4	1:140	2.3	1:40	0.5
Tar-oil disinfectant IV	1:700	8.8	1:600	6.7	1:70	1.0	1:40	0.7	1:160	2.7	1:50	0.71
Tar-oil disinfectant V	1:800	8.8	1:1000	11.1	1:120	1.7	1:100	1.7	1:80	1.3	1:100	1.4
Tar-oil disinfectant VI	1:1000	11.1	1:1000	11.1	1:120	1.7	1:120	2.0	1:250	4.2	1:100	1.4
Phenol (control)	1:80–90	1.0	1:90–100	1.0	1:60–70	1.0	1:60	1.0	1:60	1.0	1:80	1.0

[a]Minimum concentrations effective in 10 minutes.

TABLE IV. GERMICIDAL ACTION OF SAPONACEOUS MIXTURES OF U. S. P. CRESOL AND NEUTRAL OIL AT 20° C.

	B. typhosus		*B. dysenteriae* (*Flexner*)		*Streptococcus* (*hemol.*)		*Staph. aureus*		*M. tuberculosis*		*Trichophyton rosaceum*	
	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.
U. S. P. cresol 50%	1:160	2.0	1:200	2.0	1:100	1.7	1:90	1.5	1:160	2.7	1:80	1.0
U. S. P. cresol 40% / Neutral oil 10%	1:300	3.8	1:300	3.0	1:100	1.7	1:120	2.0	1:250	4.2	1:100	1.3
U. S. P. cresol 30% / Neutral oil 20%	1:350	4.4	1:300	3.3	1:70	1.2	1:60	1.0	1:200	3.3	1:80	1.0
U. S. P. cresol 20% / Neutral oil 30%	1:300	3.8	1:300	3.3	(1:40)	(0.67)	1:40	0.67	1:120	2.0	1:40	0.5
U. S. P. cresol 10% / Neutral oil 40%	1:250	3.1	1:200	2.2	(1:6)	(0.1)	(1:5)	(0.08)	1:100	1.7	1:8	1.0
Neutral oil 50%	1:160	2.0	1:160	1.6	1:6	0.08	1:5	0.08	1:16	0.27	1:5	0.06
High-boiling tar acids 50%	1:1000	12.5	1:1000	11.1	1:350	5.8	1:400	6.7	1:400	6.7	1:300	3.8
Phenol (control)	1:80–90	1.0	1:90–100	1.0	1:60	1.0	1:60	1.0	1:60	1.0	1:80	1.0

[a]Minimum concentrations effective in 10 minutes.

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obtained with a disinfectant containing 50 per cent of high-boiling tar acids derived from a foreign blast-furnace tar. This disinfectant shows a very favorable germicidal potency with respect to all test organisms used.

Conclusion

ALTHOUGH the *B. typhosus* phenol coefficient is used extensively as an index of the germicidal potency of coal-tar disinfectants, it is deemed desirable at this time to restate its limitations in the light of some newer experimental data. In the case of the pure alkylphenol derivatives, the germicidal effect upon *B. typhosus* of the lower homologs parallels that upon other vegetative pathogenic microorganisms to such an extent that the *B. typhosus* phenol coefficient might be regarded as a relative measure of the germicidal potency of these compounds. Since cresylic disinfectants contain some lower phenol homologs as the active principle, the same consideration would apply in their case.

In the case of the emulsifiable or tar-oil disinfectants, however, there exists no quantitative relationship between the effect upon *B. typhosus* and that upon other microorganisms; thus, some disinfectants of this type, with high *B. typhosus* phenol coefficients, may be less effective against other pathogenic microorganisms than those with lower *B. typhosus* coefficients; or of two products with the same phenol coefficient, one may be a better general germicide than the other. This condition arises mainly from the indefiniteness of the composition of the tar-oil disinfectants, and more particularly from the variations in the ratio of phenolic to nonphenolic constituents. The latter, consisting mostly of naphthalene hydrocarbons, appear to have a specific effect upon *B. typhosus* and certain related bacteria, such as *B. dysenteriae*, but are much less effective, or practically ineffective, against other pathogenic microorganisms.

It has been customary to require that the concentration of a given preparation to be applied in disinfection correspond in its effect upon *B. typhosus* to a 5 per cent phenol solution. (Such a concentration is calculated simply by multiplying the *B. typhosus* phenol coefficient by 20.) While there is hardly any question as to the arbitrary character of this requirement, it may be assumed that its author made it in the belief that a solution of this strength would be germicidal to other pathogenic microorganisms of epidemiologic significance. The results of Tables III and IV indicate, however, that such a solution will not always be germicidal—e. g., to a resistant streptococcus culture when tested by a laboratory method—even though it is possible that under certain conditions, such as in the disinfection of walls, floors, etc., a dilution arrived at in this fashion may be sufficient for the purpose in question.

A consideration of this 5 per cent phenol safety factor, however, bears no relation whatever to the problem of a bacteriological evaluation of germicides. This is emphasized particularly because of the insistence of some authors upon the relevance of this arbitrary figure in the bacteriological evaluation of germicides, although the issue is primarily one of specificity (or quasi-specificity) versus nonspecificity.

Since, therefore, a delineation of the bactericidal value of every coal-tar disinfectant cannot be achieved on the basis of its *B. typhosus* phenol coefficient alone, the regulatory requirement of some additional statement as to the germicidal potency with respect to a representative microorganism, other than *B. typhosus*, appears to be desirable. The hemolytic streptococcus is an infectious microorganism, and some strains appear to lend themselves for cultivation in the laboratory so as to show under standard testing conditions a standard resistance to phenol. Moreover, since the susceptibility to the action of coal-tar disinfectants of a resistant hemolytic streptococcus strain bears a quantitative resemblance to that of other microorganisms, whose destruction should be aimed at in the practice of disinfection, the adoption of a supplementary *Streptococcus hemolyticus* phenol coefficient is recommended. The consideration of both the *B. typhosus* and the *Streptococcus hemolyticus* phenol coefficients would supply a much more accurate and complete picture of the germicidal potency than that of the *B. typhosus* phenol coefficient alone. It would aid also in preventing misconceptions as to the germicidal potency of those products whose high *B. typhosus* phenol

(*Turn to Page* 121)

TABLE V. GERMICIDAL ACTION OF SAPONACEOUS MIXTURES OF U. S. P. CRESOL WITH α- AND β-METHYLNAPHTHALENE AT 20° C.

	α-Methylnaphthalene							
	B. typhosus		*Streptococcus (hemol.)*		*M. tuberculosis*		*Trichophyton rosaceum*	
	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.
U. S. P. cresol 40%—methylnaphthalene 10%	1:350	3.9	1:120	2.0	1:250	4.2	1:100	1.3
U. S. P. cresol 25%—methylnaphthalene 25%	1:300	3.3	1:80	1.3	1:200	3.3	1:50	0.6
U. S. P. cresol 10%—methylnaphthalene 40%	1:300	3.3	1:10	0.2	1:200	3.3	1:10	0.13
Methylnaphthalene 50%	1:200	2.2	(1:5)	(0.08)	1:80	1.3	>1:5	<0.06

	β-Methylnaphthalene							
	B. typhosus		*Streptococcus (hemol.)*		*M. tuberculosis*		*Trichophyton rosaceum*	
	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.	Concn.[a]	Phenol coeff.
U. S. P. cresol 40%—methylnaphthalene 10%	1:350	3.9	1:120	2.0	1:300	5.0	1:100	1.3
U. S. P. cresol 25%—methylnaphthalene 25%	1:350	3.9	1:80	1.3	1:200	3.3	1:40	0.5
U. S. P. cresol 10%—methylnaphthalene 40%	1:300	3.3	...	...	1:200	3.3	1:10	0.13
Methylnaphthalene 50%	...	...	...	...	...	...	...	...

[a] Minimum concentrations effective in 10 minutes.

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European Methods of

BED-BUG CONTROL

By Dr. W. Heerdt*
Deutsche Gesellschaft fur Schadlings-beKampfung
Frankfurt, Germany

CAN we, living as we do in the age of hygiene, of quarantine, of asepsis, in short of prevention against the omnipresent bacteriae, of sewage, of the individual towel and so on, of the many comforts afforded us, even down to the newest one—air conditioning—can we in consideration of all these modern comforts be satisfied with present methods of pest control? I should say that we certainly cannot! What we still are doing, perhaps in a little more refined manner than formerly, is it not just killing a few bugs or moths here and there? Is that pest control—not to speak of "extermination"? Is it not in principle staggering that we should be using the best of materials, yet practicing inefficient methods which lead nowhere?

For illustration, pick out one problem—the problem of the bedbug. I think it is safe to say that the majority of the world's population, including the so-called civilized population, is forced to live together with the bedbug the major time of their lives. Still it is a fact that for many years past we have known enough about this insect's habits to be able to locate it, and another fact is that we know how to kill it—the whole family! Why then is this pest not better controlled? It is very well sheltered behind the feeling of shame, and behind the general attitude of the public health departments of the world, that the bedbug is a matter of a mere private concern.

Another fact not to be forgotten in that connection is that about one-quarter of all men do not perceive the bedbug at all, because they are insensible to the sting and its consequences. To tell the folks the truth about this whole situation is an essential part of our business work.

A heartening development in this situation is the recent action of two European governments in formulating national campaigns against this pest. England and Sweden have become active against the bedbug. The first step in the English campaign was publicity. A member of the House of Lords got up in this august body and told the sad story of the bedbug in England. Next day the *London Times* printed an editorial—indeed not on the bedbug—but on *cimax lectularius*, and so the campaign was started. There was already a law which backed the action, and on such legal basis, the municipal corporations went ahead. Since December, 1932, with Manchester being credited as the first of many other English communities, tens of thousands of families every year began a new life without bedbugs, either because their furniture was fumigated right in the moving van or because their homes were fumigated from the cellar to the attic. This is done free of cost if they move into corporation-owned houses. The houses from which they move are fumigated, even if demolished, to prevent dissemination of the bug through the old timber.

A similar practice has been in force in a few of the Austrian cities for over ten years, but on a much smaller scale due to lack of funds. Some progress has also been made in Germany where a few large organizations have turned to more thorough ways of extermination in dealing with the housing of great masses of men.

Concerning Sweden I believe it is not exaggerating to call this country the cleanest on earth, not only on account of the personal cleanliness of the people, which alone is insufficient as a measure against bedbugs, but perhaps even more for their concern for efficiency even in the most minute detail. Where the people's individual fight against this insect has failed, the authorities have undertaken sweeping fumigation of entire blocks of buildings in a fight without respect to cost, and using the most modern and effective methods.

The first step, taken some years ago, was to get statistical figures on infestation. The best inquiry of the kind I know of was made in the city of Malmoe, a town of somewhat below 100,000 inhabitants, with the medical officer in charge, who now holds the highest office in the public health organization of the country, Dr. Hoejer. It is characteristic of the people's desire to assist that 94 per cent of the 6,704 questionnaires were at once filled in, and the rest on special request, so that a 100 per cent report was at the disposal of the authorities. It showed that in the crowded part of the

* Extracted from a paper "Modern Fumigation in Europe" read before the National Association of Exterminators and Fumigators, in Cleveland, Ohio, Oct. 27, 1936.

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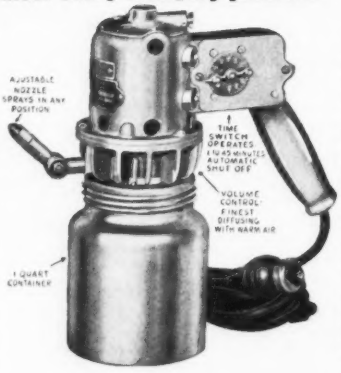
ADJUSTABLE NOZZLE SPRAYS IN ANY POSITION
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MODEL 54—1 QT. CAPACITY
It features an automatic time switch set at any point from 1 to 30 minutes — sprays desired amount without any attention whatever — automatically shuts off. Can also be used for hand spraying. Adjustable nozzle can be set for spraying in any position. Also exclusive volume control adjustment permits spraying one ounce every two to four minutes with either fine or heavy spray. MODEL 53 same as Model 54 except does not have automatic time switch.

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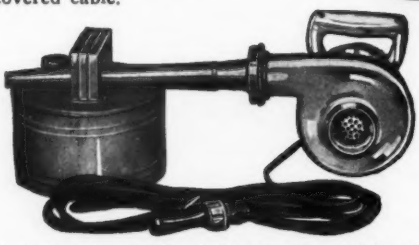

Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18' to 20'. 1/3 H.P. G.E. Universal Motor. Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions. Write today for complete description and circulars.

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city 52 per cent of the houses were infested. The average figure for the whole city was 28 per cent.

May I now quote at random a few brief notes from my records concerning Sweden?

A Swedish law issued in 1930 said:

> "If necessary, and the circumstances do not call for other measures, the Health Dept. is entitled to order the extermination of vermin in dwelling-rooms and connecting rooms, as well as in clothes and furniture."

Malmoe is considering the building of a kind of hotel for people who have to evacuate their homes because of the fumigation thereof.

In Stockholm in the year 1932, in one house 32 fumigations were carried out,

in another house	22
in 2 houses	13
in 337 houses	3-4

In Ystad only inspected and eventually fumigated furniture and the like are allowed to be sold at auction.

The city health department of Stockholm, in conjunction with the associations of owners and tenants of houses, is running advertisements in daily newspapers asking everybody to help in the campaign against bedbugs.

In the year of 1932 the loss through fire in Stockholm was Kr. 855,000 whereas it has been estimated that the cost of fumigation and extermination was over Kr. 1,000,000 for the same period.

The health department at Malmoe had to compel 89 house owners or tenants to take measures against bedbugs.

In Stockholm a house with 30 beds has been provided for dislodged tenants for use while their homes are being fumigated.

Statistics in Stockholm gave evidence that 47 per cent of the parties moving did so with bedbug infested furniture. With 20,000 - 30,000 parties moving on October 1st of each year, this means that 9,000 - 14,000 parties are moving with bedbugs.

In the month of July of this year the Swedish Parliament has asked the Government to take action with a view to methodical measures against the bedbug.

I think all that is self-explanatory—it is good news, but of course, only a start—and therefore I am closing with the summons to everybody concerned:

DON'T TOLERATE — EXTERMINATE!

Pyrethrum Analysis

(*Continued from Page* 103)

When applying our analytical method in the required conditions, after total extraction of the pyrethrins, the error is very low and approaches that of all methods used in titrating fatty substances.

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NEWS . . . . . .

Chicago Sanitary Rebuilds

Repairs to the plant of Chicago Sanitary Products Co., recently damaged by fire, have just been completed. In rebuilding the upper story, several improvements in the layout of the plant were made. In a recent interview Charles R. Lichtenberg, president of the company, expressed appreciation for the fine cooperation given them by their suppliers and competitors.

On McCormick Sales Board

John N. Curlett, manager of the flavoring extract department of McCormick & Co., Baltimore, and Lester W. Jones, purchasing agent, have been elected to the board of directors of McCormick Sales Co.

New Insecticide Firm

Fleetwood Products Co. has started operations at 8413 Oakland Ave., Detroit, manufacturing "Spa-Dead" insecticide. George Maybury heads the new firm.

Heads Insecticide Division

Conrad C. Johnson, who has been active for the past few years in field work on fumigation and insect problems, has recently been appointed manager of the insecticide division of Innis, Speiden & Co., New York.

New Sanitary Products Firm

William Berens, 166 Eastchester Road, New Rochelle, N. Y., has started in the soap and sanitary products jobbing business. A sales branch and testing department is located at 180 Ann St., Hartford, Conn. Mr. Berens plans to serve the Westchester county and Connecticut territories.

Campbell at Ohio State

Dr. F. L. Campbell, senior entomologist, Division of Control Investigations, U. S. Bureau of Entomology and Plant Quarantine, National Agricultural Research Center, Beltsville, Md., has resigned to become associate professor of Entomology at Ohio State University, Columbus, Ohio, specializing in in-

Dr. F. L. Campbell

secticides, toxicology and physiology of insects. He is retaining membership on the Committee on Methods of Testing Insecticides of the National Association of Insecticide and Disinfectant Manufacturers and will continue experimental work on insecticidal problems for the association.

Insecticide Firm Moves

General Products Co., Louisville, Ky., insecticides, has moved to 224 W. Walnut St. from 745 W. Main St.

Exterminators Meet

A meeting of the Professional Exterminators Association was held October 9 at the Building Trades Employers Assn., New York, at which the new union labor contract was fully explained and discussed. Other business included election of a nominating committee to name the slate of officers for the coming year. Those serving on the committee are Mrs. E. Mendel, Ant Roach Powder Co., H. Kaplan, Greater New York Exterminating Co., and Sidney Wimmer, Majestic Chemical & Exterminating Co. It was voted at the meeting to invite the National Association of Exterminators and Fumigators to hold its next annual convention in New York, and the delegation going to the Cleveland convention was instructed to present this invitation.

West Disinfecting Wins

West Disinfecting Co. recently was successful in an action which it instituted against Herkimer Chemical Co. and others to prevent simulation of its "CN" disinfectant trademark and labels. The final decree was signed by Hon. George H. Furman, Justice of the Supreme Court, Queens County.

Want Antiseptics

A concern in Guatemala City is interested in purchasing bulk oral antiseptics. Interested firms may communicate by addressing the U. S. Bureau of Foreign & Domestic Commerce, mentioning inquiry No. 1738.

Stop Disinfectant Claims

Hygienic Products Co., Canton, O., has entered into an agreement with the U. S. Federal Trade Commission to stop using the word "germicide" in advertising its cleansing preparation "Hy-Pro." The concern has also agreed to stop creating the impression that all disagreeable odors can be destroyed by the product.

Buffalo Firm in New Quarters

Great Lakes Chemical Utilities, Inc., insecticides, has moved recently to 9 Hamilton St., Buffalo. Their mail address is Box 33, Station B, Buffalo and their new phone number is Riverside 7269.

Detroit Firm Moves

Kleenaire Kemikuls, deodorants, has moved to 2227 — 24th St., Detroit, from 2619 Pingree St.

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Supply Distributors Meet

The Associated Sanitary Supply Distributors of Chicago held their regular monthly meeting October 12th. Following the regular business meeting, a round-table discussion of current problems of the industry was held. It is planned to have a guest speaker at the next meeting to discuss the various phases of the Social Security Act and to give the members a better idea as to what they must do to bring their firms into line with the requirements of the act.

James Varley Recovering

James Varley, vice-president and general manager of Baird & McGuire, Inc. of Missouri, St. Louis, who was severely injured recently in an automobile accident near Highland, Ill., is reported to be on the road to recovery by his son, Jack Varley. He is now at his home in St. Louis where he will probably have to stay for a month or more. No complications have been encountered in convalescence and it is now just a question of time until the broken bones heal.

A. E. Badertscher, Jr.

Dr. and Mrs. Amos Edison Badertscher of Baltimore are receiving congratulations upon the birth of a son, born October 1st at Sinai Hospital. Both mother and son are doing well, and the baby, we understand, will be named for his father. Dr. Badertscher is chief entomologist for McCormick & Co., Baltimore, and has recently been named a member of the board of directors of the company.

Alsop Moves Factory

Alsop Engineering Corp., New York, has just moved into a new factory in Milldale, Conn., which will provide more space, a more efficient manufacturing layout and better shipping facilities. The company will retain a New York office at 17 West 60th Street where it will maintain show rooms and a service department. The new plant in Milldale is located on a 10½-acre plot and the buildings cover about 60,000 square feet. The company's own trucks will make overnight deliveries to New York daily.

V. P. Adams Moves

Offices of V. P. Adams, Inc., Jamaica, Long Island, sanitary supply house, have just been moved to

V. P. Adams

new quarters in the Corn Exchange Bank Building. The firm will shortly complete its second year in business, and reports a growing clientele in the Long Island district. Vincent P. Adams, president of the firm, was in charge of Brooklyn sales for West Disinfecting Co. for ten years, prior to starting his own organization.

Nashville Concern Moves

King Bee Laboratories, janitor supplies, have moved into new quarters at 3509 West End Avenue, Nashville, Tenn. They were formerly located at 335 Second Ave. South, Nashville.

Insecticide Concern Formed

George W. Eskola Laboratory, Detroit, has just been organized to manufacture "Eskola's Insect Killer."

Janitors' Supply Firm Moves

G. W. Hancock Sales Co., janitors' supplies, has moved from 528 Howard St., San Francisco, to 616 Montclaire Ave., Oakland, Calif.

Termite Bulletin

A note in the October issue of *Soap* referred to a newly issued bulletin on termites. This was not as stated published by the American Fire & Casualty Insurance Co., but by the American Fire Insurance and Indemnity Group, 80 Maiden Lane, New York. It contains extracts from a number of bulletins issued by the U. S. Department of Agriculture and the *Engineering News Record*.

I. and D. Convention

(*From Page* 98)

Insecticide Testing—Dr. A. Weed, John Powell & Co., New York.

"Recent Scientific Developments in Insecticides and Disinfectants" —Dr. Emil Klarmann, Lehn & Fink, Inc., Bloomfield, N. J.

Report of the Nominating Committee.

Disinfectant Specifications and Standardization — J. L. Brenn, Huntington Laboratories, Huntington, Ind.

"Testing Disinfectants" — B. G. Philbrick, Skinner & Sherman, Inc., Boston.

Report of the Disinfectant Committee—Melvin Fuld, Fuld Bros., Baltimore.

Luncheon.

Tuesday P.M.—Dec. 8th

Meeting called to order.

Announcements.

Report of the Resolutions Committee.

Labeling Clinic—General Presentation of Problem by Dr. Griffin, U. S. Dept. of Agriculture, Washington, D. C.

"The Toxicity of Rotenone-containing Products"—Dr. H. B. Haag, Medical College of Virginia.

"The Pyrethrum Market Outlook" —A Discussion from the floor. Discussion leader—G. R. Rinke—John Powell & Co., New York.

Election of Officers.

Unfinished Business.

Tuesday Evening

Annual Informal Banquet.

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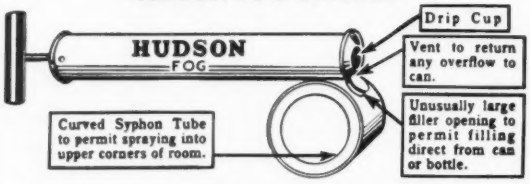
Puff! Puff! and Puff Again!

A weak spray won't reach the ceiling!

We admit this is a slight exaggeration. Perhaps you never saw a housewife climb a stepladder to get within range of insects. But that doesn't alter the fact that she'd have to do it with some of the little sprayers used today.

The difference between killing insects or merely making them groggy is in the way you *apply* a good insecticide. That's why we recommend the Hudson Fog Sprayer for household use. Where price is the sole consideration, we supply "little" sprayers. We don't like to. But our conscience is clear when the Hudson Fog enters the picture. With a powerful blast, it turns fly oils into a death-dealing vapor that goes billowing throughout the room. It's the perfect model to make your insecticide more effective and to make repeat business come automatically. Look at these features:

HUDSON FOG SPRAYER


HUDSON
FOG
Drip Cup
Vent to return any overflow to can.
Unusually large filler opening to permit filling direct from can or bottle.
Curved Syphon Tube to permit spraying into upper corners of room.

Now that you're shaping up your merchandising plans for next year, why not find out what's new in spraying equipment? Your inquiry will not obligate you in any way, and it may mean a big increase in your 1937 sales. Write us.

H. D. HUDSON MFG. CO.
589 E. ILLINOIS ST. CHICAGO, ILL.

Exterminators—Fumigators Elect Eldredge President

THE fourth annual convention of the National Association of Exterminators & Fumigators came to a close, October 28, with the election of Bartlett W. Eldredge of Waltham Chemical Co., Waltham, Mass., as president of the organization for the coming year. Regional vice-presidents named at the meeting include M. G. Jorgenson, Harry J. Hammond, Otto Orkin, William Elliott and Martin Meyer. William Buettner, of Oscar G. Buettner & Sons, Brooklyn, was re-elected secretary and H. K. Steckel, Tornado Manufacturing Co., Columbus, Ohio, treasurer. Members of the board of directors include C. Norman Dold, Gilbert Stover, Wallace Tanner, Clark A. Bergseth, Edward Arnott, William Phippard, A. E. Ritt, Irving Sameth and F. W. Bohman.

Attendance at the convention, which was held at the Hotel Statler, Cleveland, October 26, 27 and 28, numbered about 300. The program included an impressive list of speakers on both technical and practical subjects. Among those who addressed various sessions were the following: Dr. E. A. Back, Bureau of Entomology, U. S. Department of Agriculture, who spoke on "Carpet Beetles"; Dr. Alfred Weed, John Powell & Co., New York, "The Pyrethrins—What Do They Mean?": Ernest M. Mills, Agricultural College of the Northeastern States, Amherst, Mass., "European and American Methods of Rodent Control": Prof. J. J. Davis, Purdue University, "The Goal of the Exterminator", and Dr. W. Heerdt, Deutsche Gesellschaft fur Schadlings-bekampfung, Frankfurt, Germany, "Modern Fumigation in Europe."

The annual banquet of the association was held the evening of October 28, with Max J. Levy, Twin City Exterminating Co., St. Paul, president of the Northwestern Association of Exterminators and Fumigators, as toastmaster.

Bartlett W. Eldredge
. . . new president

William O. Buettner
. . . re-elected secretary

Dr. H. K. Steckel
. . . re-elected treasurer

An important feature of the convention was the supply show in operation throughout the three-day session and given special attention the evening of October 26th, "Products Night." Among the exhibitors were the following:

Acme Protection & Equipment Co., Pittsburgh, showing gas masks.

American Cyanamid & Chemical Corp., New York, showing "Zyklon" fumigating discs and equipment for fumigation.

S. B. Penick & Co., New York, showing pyrethrum products and laboratory equipment for testing insecticides.

Sennewald Drug Co., St. Louis, rat and mouse seeds and phosphorous paste.

H. D. Hudson Mfg. Co., Chicago, complete line of sprayers for professional use.

Murray & Nickell Mfg. Co., Chicago, pyrethrum products, mothproofing compound, squill, etc.

Liquid Carbonic Corp., Chicago, fumigating gases.

Real Exterminating Products, St. Louis, raticides, deodorants.

Wards Natural Science, Rochester, display of insects and entomological supplies.

McLaughlin Gormley King Co., Minneapolis, pyrethrum extracts.

Antimite Co., St. Louis, termite products.

Artisto Displays, Memphis, models of insects.

Breuer Electric Mfg. Co., Chicago, complete line of electric sprayers.

Kill Odor Co., Cleveland, K. O. system of odorless sanitation, deodorants, insecticides.

J. L. Hopkins & Co., New York, pyrethrum products, derris, squill.

Sherwood Petroleum Co., Brooklyn, pyrethrum extracts, insecticide bases.

E. I. du Pont de Nemours & Co., Wilmington, fumigating materials and equipment.

Reilly Tar & Chemical Co., Indianapolis, termite materials.

John Powell & Co., New York, pyrethrum products.

Calcyanide Co., New York, fumigating materials.

L. Sonneborn Sons, New York, insecticide bases and petroleum products.

Innis-Speiden Co., New York, fumigating and exterminating chemicals.

Bureau of Entomology, U. S. Dept. of Agriculture, Washington, display showing insects and damage they do.

FEDERAL CHAIN STORE SEALER

Sealed and Finished Two Coats Chain Store Sealer.

A QUICK ACTING DEPENDABLE SEALER

This finish is specially adapted to use for stores, armories, halls, etc. where sealing is essential to keep the grain and pores of the wood clean without a surface film. It saves time in finishing and produces a reliable seal. Wax may be applied to produce surface protection.

Send for FEDERAL FLOOR MAINTENANCE MANUAL—Tells how to protect and finish all types of Floors.

Send Coupon Now

FEDERAL VARNISH CO.
Dept. 88—337 S. Peoria St., Chicago, Ill.
Kindly send without cost or obligation your
FLOOR FINISHING & MAINTENANCE MANUAL.

Name .....
Company .....
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City ..... *State*.....

FEDERAL VARNISH CO.

DEPENDABLE *Quality* AND UNIFORMITY

CRESOL
CRESYLIC ACID
CRESOL U.S.P.
XYLENOL
TAR ACID OILS
NAPHTHALENE

...AND OTHER COAL TAR PRODUCTS FOR THE SOAP AND DISINFECTANT INDUSTRY

Reilly COAL TAR PRODUCTS

Four decades of service to a constantly growing number of industries is the best evidence of the dependability of Reilly Quality and Reilly Service. Reilly production and distributing facilities have kept step with the growth of these various industries. Today fifteen Reilly plants are available to serve you capably and quickly. The Reilly research and technical staff are at your service to assist in your special problems.

REILLY TAR & CHEMICAL CORPORATION
Merchants Bank Bldg., Indianapolis
2513 S. Damen Ave., Chicago
500 Fifth Ave., New York

File Law Suit in "No-Rub" Wax Case

FOLLOWING publication in the last issue of SOAP of a communication from W. A. Dolan, president of Wilbert Products, Inc., New York, stating that the coined term "no-rub" is the trade-marked property of that company, a communication has been received from Alvin A. Sobel, president of the Masco Chemical Co., Brooklyn, N. Y. stating that this latter firm is defendant in a court action brought against them by Wilbert Products for infringement of this mark. In his letter, Mr. Dolan stated that his company uses the term "no-rub" as a trade mark for its family of floor waxes and other polishing materials.

The letter from the Masco Chemical Co. states:

"The Masco Chemical Company, Inc., of Brooklyn, New York, are the defendants in a very interesting and important law suit brought against them by the Wilbert Products Co., Inc. The question involved, concerns the no-rub wax that has been so widely and extensively manufactured by some of the outstanding manufacturers. The firm of Kreutzer, Hauser & Selman, of 32 Broadway, New York City, are representing the Masco Chemical Company, Inc. in this action. The result of this suit will affect the whole field of no-rub waxes, and the manufacture of these emulsions.

"The proceeding was instituted in the United States District Court, Eastern District of New York, and the plaintiff complains that there is no right to use the phrase, 'no rub wax' on the part of any concern, since they have 'trade-marked that term'. It is also their contention that the words, 'no rub' is a fanciful and distinctive term and that they have spent more than $200,000 in advertising it.

"Mr. S. Stanley Kreutzer, of the firm of Kreutzer, Hauser & Selman, who is in personal charge of the litigation, sets forth in the answer to the complaint, that 'there is nothing original, fanciful, unusual or distinctive in the words, "no rub" or in the use of the words as a trademark for polish or floor wax.' It is the defendant's contention that any such trademark attempting to restrict those words to any particular concern, could not be exclusive and would be 'invalid as a trademark for polish or floor wax'.

"Mr. Kreutzer said that 'such words merely are descriptive of the goods with which it is used, and a common expression of the trade in referring to the character of the wax, and for that reason could not be the proper subject of a technical trademark'. The answer also sets forth that the attempted usurpation of so general and common a term by the Wilbert Products Co., Inc., was done in bad faith at its own risk and in violation of law.

"In view of the fact that this suit is brought to restrict the Masco Chemical Company, Inc. in the use of the term, 'no rub wax', the whole trade is vitally affected. If, in the opinion of Mr. Kreutzer, an injunction is obtained in this case, it will create a precedent that may restrict and perhaps prohibit the manufacture of 'no rub waxes'.

"The warning issued in the October issue of SOAP to manufacturers of polishes by Wilbert Products against the use of the words 'no rub', said nothing about the law suit referred to in this article. A very sweeping injunction is sought, that may give to the Wilbert Products Co., Inc. complete control of the use of certain descriptive phrases now popularly and commonly referred to in the emulsion and wax field.

"Mr. Alvin A. Sobel, President of the Masco Chemical Company, Inc., further said, that there was nothing improper in the use of the words, 'no rub wax', and 'expressly and emphatically denies the commission of any wrong by one who so describes their products'.

"Mr. Sobel also requested that all manufacturers of emulsion products immediately communicate with their attorneys, and ask them to contact Mr. S. Stanley Kreutzer, of the firm of Kreutzer, Hauser & Selman, 32 Broadway, New York City, to help them fight and defeat the injunction which is sought by the Wilbert Products Co., Inc. 'A great many large organizations', he said, 'are already cooperating'. They include the A. S. Boyle Co., Noxon, S. C. Johnson & Sons, and many others."

New Antiseptic

Eucozone Laboratories, Detroit, have placed a new stainless, colorless antiseptic, known as "Eucozone," on the market.

Disinfectant Testing

(*From Page* 109)

coefficients are not descriptive of their germicidal potency with regard to other microorganisms.

Experimental Notes

All tests involving the use of *B. typhosus* and *Staphylococcus aureus* were carried out according to the F. D. A. technic (5). As to the details of technic used in tests with the other microorganisms, the paper by Klarmann, Shternov, and Gates (3) should be consulted.

Acknowledgment

The valuable assistance rendered by L. W. Gates in the chemical phase of this work is hereby gratefully acknowledged.

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(6) Walters, A. L., *Am. J. Public Health*, 7, 1030 (1917).

LOWELL

STOPS BLIND SPOTS!

The blind spot in sprayers is that area between the poorly atomized drops without killing power.

The LOWELL NU-ACTION Sprayers send a high powered finely atomized mist that produces a compact spray of uniform killing power. The blind spot is eliminated.

Sprayer experts and just ordinary folks are more than enthusiastic over the LOWELL NU-ACTION new highly atomized power.

We knew we had a good sprayer when we designed each feature —no leak—no drip— no siphoning — FULL POWERED FORCE TO THE VERY END OF THE STROKE.

Everywhere, no matter where Sprayer and Insecticide experts convene, they agree on Lowell Sprayers. They say: "They are satisfactory."

BLIND SPOT SPRAYING ELIMINATED

The diagram shows poorly atomized spray, notice the wasted blind spots—and compare with solid atomized mist in NU-ACTION sprayers!

It's a new mist spreading **POWER HOUSE**

Send now for the Complete Lowell Catalog of Sprayers for every use.

LOWELL MANUFACTURING CO.
North Pier Terminal, Opp. Navy Pier, Chicago

NAME _____

ADDRESS _____

CITY _____

DEAD AS DOOR-NAILS

Atlantic Ultrasene

—A BETTER BASE FOR BETTER INSECTICIDES

YES, dead as door-nails. Hundreds of ordinary insecticides would have killed them. Ordinary kerosene-base insecticides would have killed them. But a good insecticide does more than just kill.

Insecticide manufacturers know that Atlantic Ultrasene is prepared expressly for one purpose — to be a better base for better insecticides. They know that this new Atlantic petroleum product is especially — and highly — refined for use as a carrier for insect killers. Because it is uniform, it evaporates quickly — leaves no thin oily film, no disagreeable odor. Add to these features the fact that it is colorless and tasteless, and Ultrasene's superiority immediately becomes obvious — especially for use in places where food is stored or prepared, such as homes, stores, markets, restaurants, hotels.

Why not join the parade of successful insecticide manufacturers who are using Ultrasene for their spray-base? We will be glad to send you more information and liberal experimental samples. Our technical department is fully equipped to help you with your problems. Write The Atlantic Refining Company, Specialty Sales Department, 260 South Broad Street, Philadelphia, Pa.

ATLANTIC ULTRASENE

First R-P Test Cases

THE first complaints to be issued by the U. S. Federal Trade Commission under the recently enacted Robinson-Patman amendments to the Clayton Act were made public Oct. 2. These first three complaints are designed as test cases, and government officials will in all probability be guided in their subsequent enforcement of the act in light of court decisions in these first cases.

One complaint names the Kraft-Phenix Cheese Corp., Chicago, the charge being that this concern discriminated in price between different purchasers of its products. The price discriminations are said to consist of an allowance of a specified discount for purchases in differing quantities of loaf cheese in 5-lb. boxes; of an allowance of a 5 per cent discount on all purchases amounting to $5 or more in which one delivery is required of package cheese and salad products, and the allowance of a 5 per cent discount to all group purchasers of such products contracting for $100 worth or more per week, where store delivery is made and only one billing is required. Allegations in the complaint against the Shefford Cheese Co., Syracuse, are substantially the same as those in the Kraft-Phenix case, except for differences in price allowances.

In a third complaint against Bird & Son, Inc., Bird Floor Covering Sales Corp. and Montgomery Ward & Co., the two first named respondents are charged with selling floor coverings to Montgomery Ward & Co. at substantially lower prices than the same are sold to competing retailers. The complaint sets out that in the case of a certain floor rug, the article is sold to Montgomery Ward in carload lots at $3.64 each, and in smaller quantities to Montgomery Ward retail stores at $3.82 each, whereas competing retailers are charged for the same floor coverings from $4.24 each, in quantities of 100 rolls or more, up to $4.85 each, in quantities of 15 rolls or less. The complaint also sets out that cheaper grades are sold at correspondingly discriminatory prices. The complaint againt Montgomery Ward & Company, Inc., is brought under Section 2 (f) of the Robinson-Patman amendment, and alleges that the respondent, knowingly received the discrimination in price, which is unlawful under that section of the Robinson-Patman amendment.

These cases are only a beginning. The commission has started out by choosing a few comparatively simple trade practices whose legality is debatable. The questions raised in these first cases are:

On quantity purchases by mail-order houses, what are the reasonable discounts from prices to other retailers on smaller purchases?

May a manufacturer quote lower prices on non-quantity sales to the retail stores of a mail-order house than to other retailers?

What are reasonable discounts by a manufacturer on quantity sales to distributors?

What discounts may he reasonably make for delivery savings? For savings by delivering the entire purchase within a specified time? For savings in clerical cost through a single billing to group purchasers, instead of an individual billing to each of the group?

The commission does not expressly ask these questions. It simply points to price discrimination and calls it illegal. Now the respondents must show that the discrimination is justified by the provision in the Robinson-Patman act permitting "differentials which make only due allowance for differences in the cost of manufacture, sale, or delivery" resulting from the circumstances of the particular transaction.

It is not expected that the commission will deny that *some* discounts are justifiable in most of the instances cited in the complaints. But the respondents have the burden of proving that the amounts of the discounts are justified by the savings.

♦

During the second year after the seeds were planted, the dry flowers of a French variety of pyrethrum contained pyrethrin I 0.84 and pyrethrin II 1.0 per cent. With succeeding crops the pyrethrin contents of the flowers decreased more or less regularly until at the 6th harvest the flowers contained only 0.47 and 0.40 per cent of pyrethrins I and II, respectively. The pyrethrin content of hand-picked flowers did not differ materially from that of flowers gathered by the comb and bin method. The loss of weight of the flowers on drying amounted to approximately 75 per cent. S. G. Jary. *J. South-Eastern Agr. Coll. Wye, Kent* No. 38, 59-66 (1936).

♦

Directors of National Can Co. have recommended that the company be merged with McKeesport Tin Plate Co., of which it has been a partial subsidiary. Under this plan the management will realize a desire to further improve the services of National Can Co. to an increasing spread of trade, through the more closely unified activities of the manufacturer of cans and tin plate. This merger will not affect or change the policy or personnel of the National Can organization, and the trade will be served as heretofore.

PLAN NOW TO ATTEND
23rd ANNUAL MEETING

National Association of Insecticide and Disinfectant Manufacturers,

Philadelphia Athletic Club, Philadelphia

December 7 and 8

Room Reservations Should Be Made Promptly Thru Robert Low, Penn A. C., Philadelphia.

Sanitary Supply Houses!

GET NEW BUSINESS FROM OLD CUSTOMERS

Every janitor supply and sanitary supply house can build up a profitable repeat business with this neat, compact sanitary napkin vendor. Let us tell you about our special deals!

MODESS SANITARY NAPKIN VENDORS

for Women's Rest Rooms in Factories, Schools, Office Buildings, Etc.

Practically all of your accounts are prospects.

Get the business now and enjoy a steady repeat order sale for years to come.

Vendors available in choice of 5c or 10c operation.

SOME TERRITORIES OPEN

WRITE FOR OUR FREE VENDOR DEAL

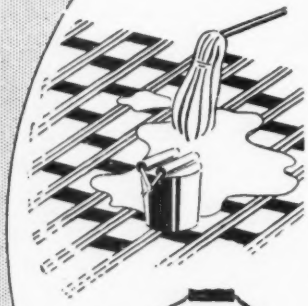
Exclusive Distributors

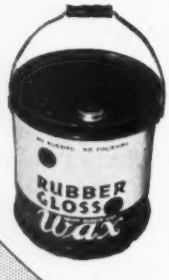
Rochester Germicide Company

95 DOWLING PLACE, ROCHESTER, N. Y.

RUBBER GLOSS FLOOR WAX

is waterproof





30 Wet Moppings Didn't Wash It Off

That's the report of one big user . . .

There are even better records . . . all tremendously impressive . . . and most convincing.

But water resistance is just one of several outstanding features. Rubber Gloss is hard, without brittleness . . . and non-slippery. It adds a bright, natural lustre without polishing and a transparent film that neither dims nor darkens patterns.

Those are facts, that can be demonstrated . . . that will be demonstrated in a free test on your own floors. 'Phone the distributor in your town.

FRANKLIN RESEARCH CO.
Philadelphia, Pa.

Distributors in all principal cities

"All our containers are tamper-proof sealed, and guaranteed only when unbroken."

EXCLUSIVE TERRITORIES

Still Available

Distributors will find Franklin floor maintenance preparations exceptionally profitable to handle. The line is complete, with products for floors of all types. Every item is of superior quality, and rightly priced. Franklin distributors are well supported by national advertising, ample selling helps and the close cooperation of our sales department. A special representative will call and explain in detail. Write or wire.

FRANKLIN RESEARCH CO.
PHILADELPHIA
W. J. LAROCHE
Sales Manager

INDUSTRIAL COATINGS

Through the Wilbur White Division of FRANKLIN RESEARCH COMPANY there are available many highly technical emulsions that adapt themselves to the factory coating of rubber, leather, paper, nursery stock, citrus fruits, etc. . . . Special sales information on request.

Exterminators Strike Ends

The Associated Exterminators and Fumigators of New York have just signed a contract with Local No. 155 of the Building Service Employees Union, ending the strike which has impeded operations in the New York exterminating and fumigating industry for the past eleven weeks. A union contract had previously been signed several weeks ago by the Professional Exterminators Association, so now practically the entire New York industry is on a closed shop basis. The new union contract provides for a minimum wage of $26.50 per week up to October 5, 1937, and $28.00 per week from that date to December 31, 1938. The only increase in wages for those receiving above the minimum will take effect with October 5, 1937 when those receiving less than $30.00 will receive $1.00 more per week. A week's work will consist of forty hours to be divided into five consecutive working days.

New, modernly equipped laboratories have recently been completed and put into operation by Felton Chemical Co., Brooklyn. Every facility for research and technical control is provided in the new quarters.

Calif. Insecticide Labels

A recent bulletin of the National Association of Insecticide & Disinfectant Manufacturers gives the latest information on the attitude of the California State Government officials with regard to labeling of insecticides for sale within the state. While these officials are under the impression that such claims as "non-injurious" or "harmless" are unqualified with respect to pyrethrum insecticides, they do not take exception to their use when accompanied by the phrase "when used as directed." It should be noted that the above exception does not apply to any insecticides other than those of a pyrethrum base.

Rotenone Separation

Rotenone and preparations containing it and having insecticidal value are separated by subjecting the natural substances to distillation at raised temperatures in a high vacuum and collecting the distillate. For example, dry ground derris root is mixed with a linseed oil stand oil and the mixture is fed onto a surface heated to about 120° C., in close proximity to a cold condensing surface, and distilled under about 10^{-4} mm. pressure. Or finely ground derris root is distilled at 150-160° C. and 10^{-3} mm. pressure in an apparatus where the evaporating and condensing surfaces comprise thin flexible metal bands, the effective portions lying in horizontal planes with the evaporating surface below the condensing surface, adapted to move in close proximity to heating and cooling bodies, respectively. Eric W. Fawcett and Imperial Chemical Industries, Ltd. British Patent No. 446,576; French Patent No. 797,052.

Monsanto Adds to Staff

Z. T. Davis has been added to the Chicago sales staff of Monsanto Chemical Co. Mr. Davis, who has had considerable experience in the chemical field, will make his headquarters at the Chicago office.

Insect Powders

A simple powdered insecticide is made by using pyrethrum or derris extracts absorbed on finely ground talcum. This permits a high concentration of active substance. A mixture which is especially good for killing the eggs and larvae of household insects contains 10 per cent powdered derris root, 65 per cent tobacco dust and 25 per cent powdered sulfur. The derris root should contain at least 8 per cent of rotenone. *Seifensieder-Ztg.* **63**, 777-8 (1936).

To Market New Disinfectant

Sanitary Products Co., 1315 Howard Street, Omaha, Nebr., will have a new chlorine liquid disinfectant for soda fountain and beer dispensers within the next two months. This new product is not quite ready for the market at this date, according to Marvin Stearns assistant manager of this company. M. J. Norton, proprietor, has been confined at his home on account of illness the past two months.

Sanitary Products Co. Moves

Sanitary Products Sales Co., Passaic, N. J., has moved to new quarters at 58 Central Ave., Clifton, N. J. The firm manufactures and distributes a line of soaps, deodorants, disinfectants, and allied sanitary specialties.

PYRETHRUM EXTRACT

odorless—stabilized

Two Concentrations

20 to 1 5 to 1

From direct imported flowers, we manufacture pyrethrum extracts of standard strength in deodorized petroleum base,—and stabilized against deterioration. These extracts are sold at prices competitive with ordinary extracts.

Other HAMMOND Products

Pyrethrum Flowers—Granulated ready for percolation.
Rotenone Extracts—Standardized and stabilized against deterioration.
Rotenone-Pyrethrum Extracts—Various concentrates in combinations as required.

Ask us for further information.

HAMMOND
Paint & Chemical Co.
BEACON NEW YORK

. . . . boost your

DISINFECTANT COEFFICIENTS

by improved dispersion,—especially of high-test disinfectants,—by passing them through

The GAULIN two-stage HOMOGENIZER

By better dispersion,—complete and uniform dispersion of the coal-tar acids,—you can produce a better disinfectant from the same raw materials. We are informed by a manufacturer who has used one of our HOMOGENIZERS for some years, that passing a disinfectant through the equipment boosts the phenol coefficient. Send us a sample of your product and let us show you how we can improve it with this machine.

Also for producing better floor waxes, polishes, and other emulsions,—wax or oil.

MANTON-GAULIN MFG. CO.
19 Charlton St. Everett, Mass.

STRAIGHT SHOOTING

Let us place our experience and knowledge of world markets at your disposal.

CHEMICALS
INSECTICIDES
OILS—WAXES

H. H. ROSENTHAL CO., INC.
25 EAST 26th ST. NEW YORK, N. Y.
Cable Address: RODRUG, N. Y.

Special Introductory Offer

See for yourself the simplest and at the same time the most satisfactory powdered soap dispenser yet developed. A sample dispenser in satin finish will be shipped postpaid for only 85c. Mirror high polish for 95c each.

This new dispenser is sturdy and attractive, and at the same time foolproof, unbreakable and rustproof—eliminating complaints from users on these scores. It requires no special tools to install and can be adjusted easily to discharge various quantities of soap. Will not clog.

▼

PRESTO MFG. CO.
4044 20th AVE. S. MINNEAPOLIS

Disinfectant Formulas

Editor, SOAP Magazine
254 West 31st Street
New York City
Gentlemen:

We have all heard something about the devaluation of the dollar, but when it comes to the devaluation of pine oil disinfectant, we take off our hats to the formulas which you have reprinted in your October issue, as transcribed from *Manufacturing Chemist*, No. 7, 282 (1936). If these are formulas of pine oil disinfectants, then the Atlantic Ocean is a large batch of chlorine disinfectant.

The first formula given furnishes less than 6 per cent of pine oil, more than 78 per cent of water. The second formula shows less than 46 per cent of pine oil, more than 51 per cent of water.

Pine oil disinfectants as made by experienced manufacturers of the industry, and as supervised by the Federal Insecticide and Fungicide Board, should contain the maximum of pine oil, made miscible by the minimum amount of soap base containing the minimum content of water required for making the soap. The addition of any adulterant such as hydro-carbon oil, or any considerable excess of water produces an article that cannot be called a pine oil disinfectant.

Some of your readers may fall into the error of putting up and selling pine oil disinfectants, compounded on these formulae. Any manufacturer shipping such a product in interstate commerce, branding it as a pine oil disinfectant, is likely to get himself into serious trouble with the proper agents of the U. S. Department of Agriculture, and is certainly competing with genuine pine oil disinfectants, on an unfair basis of manufacture.

Recent standard specifications for pine oil disinfectants worked out by a committee of the National Association of Insecticide and Disinfectant Manufacturers, state, among other things, that such a disinfectant shall contain not less than 60 per cent steam distilled pine oil, not more than 10 per cent water, inert matter. The writer feels, that, in protection of October readers of SOAP, you will be willing to publish this comment. It may invite further discussion of the subject, which may tend to help the industry maintain a reliable minimum standard for a good pine oil disinfectant.

Yours truly,
Rochester Germicide Co.,
By W. B. Eddy, Gen'l Mgr.

Baker American Can Head

Dr. Herbert A. Baker has just been elected president of American Can Co., succeeding C. E. Green. Dr. Baker first joined American Can in 1906 and four years later was made the company's chief chemist. In 1918 he became sales manager in Chicago, in which position he remained until elected vice-president in charge of sales in 1932.

"Phoenix Flame" Honored

The *Phoenix Flame*, house publication of Phoenix Metal Cap Co., Chicago, has again been selected as one of the "Direct Mail Leaders" of the year in a contest which preceded the annual convention of the Direct Mail Advertising Association. The *Phoenix Flame*, which has won this honor for the third successive year, is mailed without charge to users and prospective users of metal caps.

Continental Names F. G. Searle

F. Gladden Searle has been appointed general sales manager of Continental Can Co., New York, succeeding his brother, Thaddeus G. Searle, who died recently. He has been with the organization since 1919 as a representative district sales manager, and later as assistant manager of sales.

Ungerer Price List

Ungerer & Co., New York, are releasing to the trade their current price list showing the most representative of their essential oils, aromatic chemicals, compounded bases, etc.

Sign F T C Stipulations

The following concerns have recently signed agreements with the U. S. Federal Trade Commission to refrain from practices complained of by the commission in their sales and advertising programs:

Durand - McNeil - Horner Co., Chicago, selling "Klor-O-Wash," will desist from advertising that this cleaning compound is a deodorizer and disinfectant for chinaware, glassware, pots, pans, washbowls, bathtubs, tile floors, linoleum and sick room equipment, unless such representations are accompanied by instructions to the effect that the places or articles to be sterilized and disinfected should be thoroughly washed before using "Klor-O-Wash."

Star Water Manufacturing Co., Waterbury, Conn., agrees to discontinue representations that its "Star Water" washing fluid is a non-poisonous germicide and is safe; that it is an antiseptic, disinfectant or deodorant, without following such assertion with directions for cleansing the article to be disinfected or deodorized; and that it sterilizes, kills bacteria and disinfects when used to wash dishes.

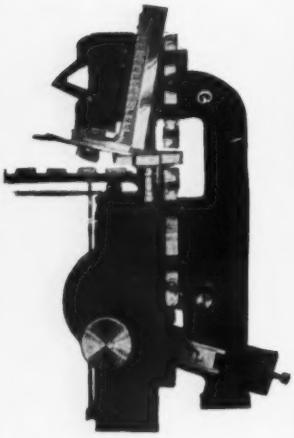
Wilbert Products Co., New York, selling a washing fluid designated "Javex," will cease representing that the product disinfects or deodorizes, unless directions are given for first cleansing the article to be disinfected or deodorized; that it kills all germs, including their spores, or destroys odors, and that it is "magical" in whitening clothes.

Hemerald Co., Detroit, will refrain from advertising that "Hemerald Pile Ointment" is an antiseptic or a germicide.

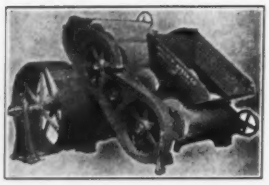
Blair Laboratories, Lynchburg, Va., will stop representing that its "Whitehouse Cleaning Fluid" is "the" perfect home dry cleaner. In advertising another preparation, "Airo-Zone," the respondent will discontinue claims that it makes clothes closets moth-proof.

I. & D. Convention
Philadelphia, Dec. 7-8

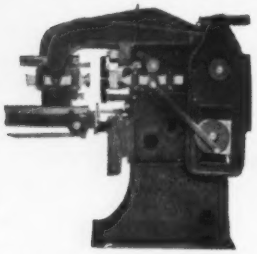
Special Offerings of SOAP MACHINERY *Completely Rebuilt!*



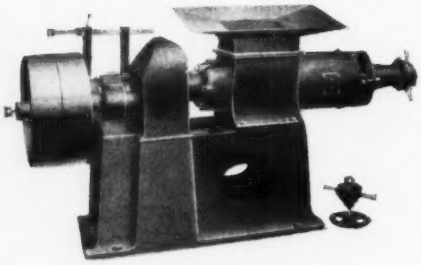
Small size fully automatic Jones toilet soap press. Capacity 150 to 200 small cakes per minute. A real buy at an attractively low price. Has been completely rebuilt in our own shops.



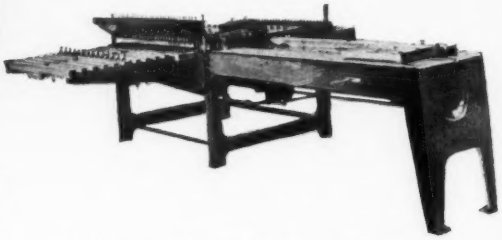
H-A SOAP MILL
This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.



4 JONES AUTOMATIC combination laundry and toilet soap presses. All complete and in perfect condition.

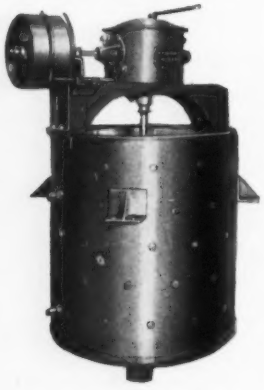


Single screw soap plodders with 6, 8, 10 or 12 inch screws. All completely rebuilt and unconditionally guaranteed.



2 Automatic Power Soap Cutting Tables

NEW CRUTCHERS!



This Newman brand new, all steel steam jacketed soap crutcher. Will crutch any kind of soap. We also build another crutcher especially adapted for laundry soap in addition to other new soap machinery such as frames, cutting tables, etc. Send for complete list.

ADDITIONAL REBUILT SOAP MACHINERY

All used equipment rebuilt in our own shops and guaranteed first class condition.

H-A, 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
Empire State, Dopp & Crosby Foot Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Power slabbers.
Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
J. H. Day Jaw Soap Crusher.
H-A 6, 8 and 10 inch Single Screw Plodders.
Allbright-Nell 10 inch Plodders.
Filling and Weighing Machine for Flakes, Powders, etc.
Steel Soap frames, all sizes.
Steam Jacketed Soap Remelters.
Automatic Soap Wrapping Machines.
Glycerin Evaporators, Pumps.
Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
Perrin 18 inch Filter Press with Jacketed Plates.
Gedge-Gray Mixers, 25 to 6000 lbs. capacity, with and without Sifter Tops.
Day Grinding and Sifting Machinery.
Schultz-O'Neill Mills.
Day Pony Mixers.
Gardiner Sifter and Mixer.
Proctor & Schwartz large roll Soap Chip Dryers complete.
Doll Steam Jacketed Soap Crutchers, 1000, 1200 and 1350 lbs. capacity.
Day Talcum Powder Mixers.
All types and sizes—Tanks and Kettles.
Ralston and H.A. Automatic Cutting Tables.
Soap Dies for Foot and Automatic Presses.
Broughton Soap Powder Mixers.
Williams Crutcher and Pulverizer.
National Filling and Weighing Machines.

Plant of The Holman Soap Co., Chicago is offered for sale. Completely equipped modern factory.

Send us a list of your surplus equipment—we buy separate units or complete plants.

NEWMAN TALLOW & SOAP MACHINERY COMPANY

1051 W. 35th St.
CHICAGO

Our Forty Years Soap Experience Can Help Solve Your Problems

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, $2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, $1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 254 West 31st St., New York.

Positions Wanted

Oil Plant Superintendent—Man with many years experience as superintendent of plant refining, hydrogenating edible fats and oils, desires to make new connection where this experience will be valuable. Address Box No. 844, care *Soap*.

Capable, 30 years' experienced soap manufacturer of all kinds of household, toilet, oil, and glycerine soaps, powders, shaving soaps; twitchelling and glycerine treatment; specialties and cosmetics and liquid soaps, seeks position with a well-founded firm. Address Box No. 845, care *Soap*.

Chemist—recent chemical graduate with two years' experience in research laboratory of large chemical company working on soaps, detergents, wetting agents, and metallic soaps, desires position with laboratory or plant of company in east. Good record; best references. Address Box No. 837, care *Soap*.

Soapmaker and Chemist — well-experienced and with splendid record to his credit, thoroughly familiar with all phases of soap manufacture, pretreatment of fatty material, glycerine recovery, calculation details, etc., desires permanent connection with reliable, progressive firm. Address Box No. 847, care *Soap*.

Soapmaker and Chemist, making all kinds fine toilet, laundry soaps, etc. Long experience; seeks permanent connection. Address Box 842, care *Soap*.

Chemist — experienced in soaps, oils, fats, cosmetics, desires position in control, analytical, research or production department. Moderate salary. Excellent references. Address Box No. 835, care *Soap*.

California—Connection for 1937 desired by competent soap maker and chemical engineer with 14 years' practical experience. Excellent references. Not interested unless full responsibility over production, analyses and equipment. Address Box No. 839, care *Soap*.

Positions Open

Wanted—Factory Representative — full or part

SPECIAL

1—Proctor & Schwartz Soap Chip Dryer with 5 chilling roll unit.

REBUILT SPECIAL OFFERINGS

1—Chilling Roll Unit 4' x 7".
1—Jones Automatic Pin Die Press.
2—Houchin-Aiken Empire State Foot Pressses.
1—2 way Soap Cutting Table.
6—400 lb. Soap Frames.
20—1200 lb. Soap Frames.
1—10A Blanchard Mill.
1—65 Gal. Dopp Jacketed Kettle.
1—Soap Chipper.
1—Soap Grinder.
4—Filter Presses—10" to 24" Square.
2—Jacketed Vertical Crutchers.
3—Vertical Jacketed 3000 lb. Kettles.
6—Glass Lined Kettles, 50 to 3000 Gals.
1—Soap Slabber.
1—Proctor 4 Fan Soap Chip Dryer.
3—Plodders; 6", 10" and 12".
1—3 and 4 Roll Stone and Steel Roller Mills.

Send for Bulletin No. 101 *giving full listings*

We Buy Your Surplus Equipment for Cash, From Single Items to Complete Plants.

STEIN EQUIPMENT CORP.

426 BROOME STREET — NEW YORK, N. Y.
Phone: CAnal 6-8147 — Cable Address "MACHINEQUIP"

REBUILT SOAP MACHINERY

SPECIALS

Machinery from former plants of National Soap Powder Co., A. W. Barnes Soap Co., and Pennsylvania Soap Co.

1—Allbright-Nell 4'x8' Cooling Roll, with top feeder roll, scraping knife.
4—5000 lb., 1500 lb., 1000 lb., Jacketed Vertical Crutchers.
2—1500 lb. Horizontal Crutchers.
1—Steel Soap Kettle, 5' dia. x 10' high.
1—Houchin 400 lb. Amalgamator.
4—Houchin Soap Plodders, 8" and 10".
2—Rucchmann 4-roll inclined Granite Mills, 18"x24", motor driven.
1—Broughton 1200 lb. Soap Powder Mixer.
2—Tabor Soap Pumps.
4—Houchin 4 and 6-knife Chippers, 20".
1—Houchin Soap Foot Press.
1—Houchin 1500 lb. Power Slabber.
1—Houchin Hand Slabber.
2—Houchin 2-way Soap Cutting Tables.
1—Jones "A" Automatic Soap Press.

1—Proctor and Schwartz Soap Chip Dryer, steel frame, 7-section, 1—cooling section, complete with 5-roll P. & S. Mill. Located on Pacific Coast.

MISCELLANEOUS—Soap Frames, Kettles, Mixers, Pony Mixers, Powder Fillers, Labelers, Wrappers, Tanks, Pumps, Boilers, etc.

Send for Latest Bulletin.

CONSOLIDATED PRODUCTS CO., INC.
15-21 Park Row — New York, N. Y.
BArclay 7-0600

We buy your idle Machinery—Send us a list.

A large modern floor wax manufacturing plant catering to the needs of bulk buyers under strict scientific chemical supervision.

Quality **Uniformity**
Price **Service**

We Print Your Label

BUCKINGHAM WAX CORP.
Van Dam St. and Borden Ave. Long Island City, N. Y.

F. & S.
Quality Colors
for
TOILET SOAPS
LIQUID SOAPS
TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.
205 FULTON STREET
NEW YORK, N Y.
Import—Manufacture—Export

New—
MIMOSA S
for toilet soaps

A delightful refreshing perfume. We solicit your inquiries.

COMPAGNIE PARENTO, Inc.
CROTON-ON-HUDSON, N. Y.
NEW YORK CITY DETROIT CHICAGO
LOS ANGELES SAN FRANCISCO
SEATTLE PORTLAND, ORE TORONTO

MECHLING'S
EST. 1869
PHILADELPHIA
CAMDEN, N. J.
BOSTON, MASS.
SILICATE OF SODA
MECHLING BROS·CHEMICAL COMPANY

time—sell complete line sanitary chemicals, seals, polishes, paint removers, cleaners, soaps, disinfectants, etc. Protected business — real co-operation. Snappy sixty-five page illustrated catalog assists you in making big money. Permanent. Write or see Mr. B. Hulsh, Trojan Corporation, 3107 S. Wabash Ave., Chicago.

A Prominent Manufacturer of liquid soaps, disinfectants, deodorizing cakes, etc., has an opening for a dependable sales representative. Address Box No. 838, care *Soap.*

Miscellaneous

Floor Brushes — We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

Respirators, Goggles, Thermometers and Hydrometers for every purpose. Write for prices. General Scientific Co., 2620 N. 23rd St., Philadelphia, Pa.

Closing out small soap equipment, fourteen good soap frames, two thousand pound kettle, crutcher, power chipper, soap stamp. Write Seitz Packing Co., Inc., St. Joseph, Mo.

Have you trouble with soap? Expert soap man will help you; any kind of soap: household, toilet, shaving, liquid, powder, paste, oil soap. Also analyses. Formulate new ideas. Address Box No. 846, care *Soap.*

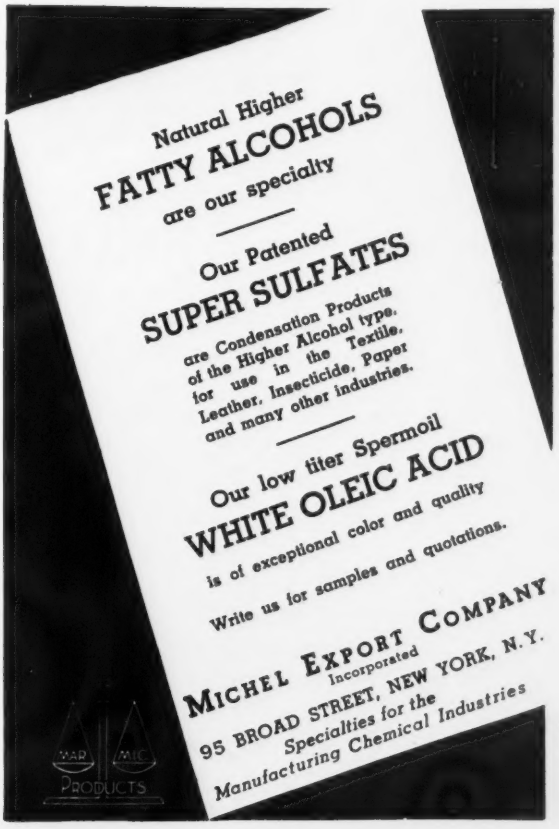
Expert trouble shooter, soapmaker chemist with long experience offers assistance. Formulas, shortcuts and analyses for textile, laundry, dry-cleaning, toilet, filled, powdered, rug and oil soaps; Castile soap, shampoos and shaving cream; Insecticide and self-polishing wax. Results or money back. Address Box No. 841, care *Soap.*

Valencia Pumice—Something new in American Pumice Stone; Lump and Ground. Its clean, light color will please you. Barnsdall Tripoli Corp., Seneca, Mo.

For Sale—Formulas and Trademark Names—General Chemical Household Cleaning Powder Compound, 1-pound package and a Dairy Cleaning Powder in bulk. Address Box No. 843, care *Soap.*

Exchange large German soap factory for one in U.S.A. or other business. Long established manufacturer of famous brands with full gravity-flow-production and modern equipment. Very advantageous proposition for man with "arian ancestor-tree." Address Box No. 840, care *Soap.*

For Sale—Coarse Pyrethrum Residue—left after percolating Insect Spray—oil-loaded—at your own price — steady supply all year around. Vermitox Laboratories, Inc., 231 Halsey St., Newark, N. J.


Natural Higher
FATTY ALCOHOLS
are our specialty
Our Patented
SUPER SULFATES
are Condensation Products of the Higher Alcohol type, for use in the Textile, Leather, Insecticide, Paper and many other industries.
Our low titer Spermoil
WHITE OLEIC ACID
is of exceptional color and quality
Write us for samples and quotations.
MICHEL EXPORT COMPANY
Incorporated
95 BROAD STREET, NEW YORK, N.Y.
Specialties for the Manufacturing Chemical Industries
MAR MIC PRODUCTS

WHITE COCONUT OIL
AND
PALM OIL FATTY ACIDS

ALSO COMPLETE
LINE OF VEGETABLE
AND ANIMAL OIL
FATTY ACIDS

WECOLINE
PRODUCTS, Inc.
15 EAST 26th ST. NEW YORK

We announce development of new type soap colors

PYLAKLORS

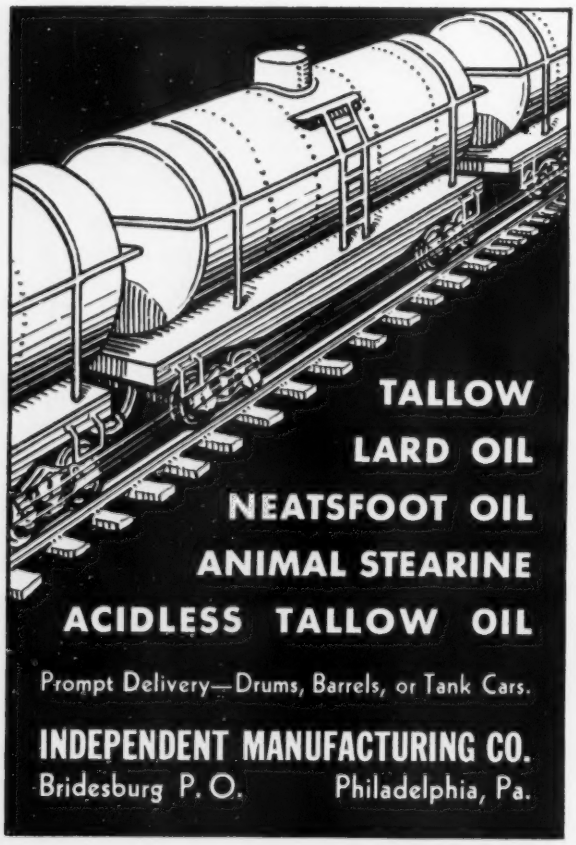
They have good fastness to alkali, light, tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

It will pay you to send for testing samples.

PYLAM PRODUCTS CO., INC.
Manufacturing Chemists, Importers, Exporters
799 Greenwich St. New York City
Cable Address: "Pylamco"



TALLOW
LARD OIL
NEATSFOOT OIL
ANIMAL STEARINE
ACIDLESS TALLOW OIL

Prompt Delivery—Drums, Barrels, or Tank Cars.

INDEPENDENT MANUFACTURING CO.
Bridesburg P. O. Philadelphia, Pa.

SPECIALTY SOAP PRODUCTS

Liquid Soap Base
Potash Oil Soap
Liquid Soap
U. S. P. Green Soap
U. S. P. Cresol Compound
Coal Tar Disinfectants
Pine Oil Disinfectants
Insecticides
Liquid Floor Wax
Auto Soaps
Shampoo
Pine Oil Soap
Shampoo Base

We manufacture for the trade only

HARLEY SOAP CO.,
2852 E. Pacific St.,
Philadelphia, Pa.

Ask for samples of above specialty bulk products.

STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of March 3, 1933, of Soap, published monthly at New York, N. Y., for October 1, 1936.

State of New York, County of New York.

Before me, a Notary Public in and for the State and County aforesaid, personally appeared Grant A. Dorland, who, having been duly sworn according to law, deposes and says that he is the Business Manager of Soap and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are: Publisher, MacNair-Dorland Company, Inc., 254 W. 31st St., N. Y. C.; Editor, Ira P. MacNair, 254 W. 31st St., N. Y. C.; Managing Editor, None; Business Manager, Grant A. Dorland, 254 W. 31st St., N. Y. C.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

MacNair-Dorland Co. Inc., 254 W. 31st St., N. Y. C.; Ira P. MacNair, 254 W. 31st St., N. Y. C.; Grant A. Dorland, 254 W. 31st St.,

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustee, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stocks, bonds, or other securities than as so stated by him.

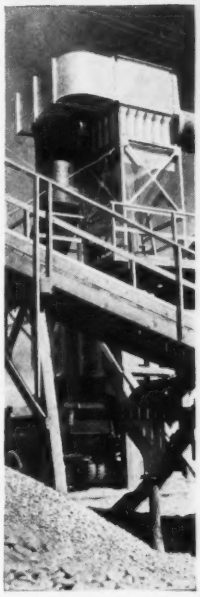
5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the months preceding the date shown above is ——. (This information is required from daily publications only.)

GRANT A. DORLAND,
Business Manager.

Sworn to and subscribed before me this 16th day of September, 1936.

Samuel Newmark, Notary Public, Nassau County. Certif. filed in N. Y. County. N. Y. County No. 106. Reg. No. 6-N-57. Commission expires March 30th, 1938.

MULTICLONE DUST CONTROL SYSTEMS



High velocity of hot or cold dust-laden gases in restricted tubes saves power and produces centrifugal effects several hundred times stronger than gravity. Exceptionally high efficiency economizes space and installation costs. Built in units of various multiples of tubes, Multiclones offer perfect flexibility as to capacity, and will collect finer particles than any other type of centrifugal separator. Simple, compact, fireproof, for inside or outside installation. New Bulletin now available.

WESTERN PRECIPITATION COMPANY
1016 W. 9th St., Los Angeles, Calif. • 405 Lexington Ave., New York
Precipitation Co. of Canada, Ltd., Dominion Square Bldg., Montreal
COTTRELL ELECTRICAL PRECIPITATORS . . . PEEBLES SPRAY DRYERS
Specialists in Dust and Fume Control for more than a quarter century.

The New Huber
Electro-Perfection Crutcher

The greatest advancement in Crutcher construction in recent years—push button control. Electrically Driven Two Speed and Reverse Crutcher. Built in three sizes:—1500—2400—3600 lbs.

HUBER MACHINE CO.
265 46th Street Brooklyn, N. Y.

YOUR
OWN BRAND
Toilet
Soaps
at
Small
Cost

For Details Address

GEO. A. SCHMIDT CO.
Manufacturers of SOAPS *of Every Description*
236-238 West North Avenue
Chicago.

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in SOAP. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, packaging materials, etc., in which you are particularly interested. Refer to the Index to Advertisements, on page 138, for page numbers, *"Say you saw it in SOAP."*

ALKALIES

Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
Eastern Industries
Hooker Electrochemical Co.
Innis, Speiden & Co.
Niagara Alkali Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

American-British Chemical Supplies
Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
Dow Chemical Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Monsanto Chemical Co.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
George Silver Import Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

BULK AND PRIVATE BRAND PRODUCTS

Baird & McGuire, Inc.
Buckingham Wax Corp.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Federal Varnish Co.
Franklin Research Co.
Fuld Bros.
Harley Soap Co.
Koppers Products Co.
Kranich Soap Co.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Uncle Sam Chemical Co.
T. F. Washburn Co.
White Tar Co.
Windsor Wax Co.

CHEMICALS

American-British Chemical Supplies
Columbia Alkali Co.
T. G. Cooper & Co.
Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Eastern Industries
General Chemical Co.
Grasselli Chemical Co.
Hooker Electrochemical Co.
Industrial Chemical Sales Co.
Innis, Speiden & Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
Philadelphia Quartz Co.
H. H. Rosenthal Co.
Solvay Sales Corp.
Standard Silicate Co.
Jos. Turner & Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid Oil, etc.)
American-British Chemical Supplies
Baird & McGuire, Inc.
Barrett Co.
T. G. Cooper & Co.
Innis, Speiden & Co.
Koppers Products Co.
Monsanto Chemical Co.
Reilly Tar & Chemical Co.
White Tar Co.

COLORS

Fezandie & Sperrle
Pylam Products Co.

CONTAINERS and CLOSURES

Anchor Cap & Closure Corp. (Closures & Bottles)
Capstan Glass Co. (Bottles)
Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
National Can Co. (Cans)
Salem Glass Works (Bottles)
Wilson & Bennett Mfg. Co. (Steel Pails and Drums)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.

ESSENTIAL OILS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Co.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co
George Silver Import Co.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

(*Continued on page* 136)

PROFESSIONAL DIRECTORY

PEASE LABORATORIES, Inc.
Chemists, Bacteriologists, Sanitarians
39 West 38th Street
New York
Food, Drug and Cosmetic Problems—Compliance with Official Requirements—Meeting New and Anticipated Competitions with Improved and New Products

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SEIL, PUTT & RUSBY, INC.
Analytical and Consulting Chemists
Specialists in the Analysis of Pyrethrum Flowers, Derris Root, Barbasco, or Cube Root—Their Concentrates and Finished Preparations
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16 East 34th Street, New York, N. Y.

STILLWELL AND GLADDING, Inc.
Analytical and Consulting Chemists
Members Association of
Consulting Chemists and Chemical Engineers
130 Cedar Street New York City

APPLIED RESEARCH LABORATORIES, Inc.
DAYTON, N. J.
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Deodorant Coefficients (Packchanian Method)
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RAW MATERIAL AND EQUIPMENT GUIDE

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MACHINERY

Ertel Engineering Corp. (Filters, Mixers, Bottle Fillers)
Anthony J. Fries (Soap Dies)
Houchin Machinery Co. (Soap Machinery)
Huber Machine Co. (Soap Machinery)
International Nickel Co. (Monel Metal)
R. A. Jones & Co. (Automatic Soap Presses and Cartoning Machinery)
Manton-Gaulin Mfg. Co. (Homogenizer)
Package Machinery Co. (Packaging)
Proctor & Schwartz (Dryers)
C. G. Sargent's Sons Corp. (Dryers)
Stokes & Smith Co. (Packing Machinery)
Western Precipitation Co. (Multiclones)

MACHINERY, USED

Consolidated Products Co.
Newman Tallow & Soap Machinery Co.
Stein Equipment Corp.

MISCELLANEOUS

American Standard Mfg. Co. (Wax Applicator)
Anchor Cap & Closure Corp. (Metal Caps)
T. G. Cooper & Co. (Waxes)
Dobbins Mfg. Co. (Pails, Mop Wringers, etc.)
General Chemical Co. (Fluorides)
General Naval Stores Co. (Pine Oil-Rosin)
Hercules Powder Co. (Pine Oil and Rosin)
Industrial Chemical Sales Co. (Decol. carbon, Chalk)
Innis, Speiden & Co. (Fumigants and Waxes)
Pylam Products Co. (Lathering Agent)
Rochester Germicide Co. (Vending Machines)
Rohm & Haas Co. (Insecticide Base)

OILS AND FATS

T. G. Cooper & Co.
Eastern Industries
Independent Mfg. Co.
Industrial Chemical Sales Co.
Leghorn Trading Co.
Michel Export Co.
Murray Oil Products Co.
Newman Tallow & Soap Machinery Co.
Orbis Products Corp. (Stearic Acid)
Wecoline Products Co.
Welch, Holme & Clark Co.

PARADICHLORBENZENE

Dow Chemical Co.
E. I. du Pont de Nemours & Co.
Hooker Electrochemical Co.
Monsanto Chemical Co.
Niagara Alkali Co.
H. H. Rosenthal Co.
Solvay Sales Corp
Jos. Turner & Co.

PERFUMING COMPOUNDS

Aromatic Products, Inc.
Compagnie Parento
Dodge & Olcott Co.
P. R. Dreyer Inc.
Felton Chemical Corp.
Firmenich & Co.
Charles Fischbeck & Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Mabee & Reynard, Inc.
Norda Essential Oil & Chemical Co.
Orbis Products Corp.
Schimmel & Co.
George Silver Import Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.

PETROLEUM PRODUCTS

Atlantic Refining Co.
O'Connor & Kremp
Sherwood Petroleum Co.
L. Sonneborn Sons.

PYRETHRUM AND DERRIS PRODUCTS

Insect Flowers and Powder, Pyrethrum Extract, Derris Products

Derris, Inc.
Hammond Paint & Chemical Co.
S. B. Penick & Co.
R. J. Prentiss & Co.
McCormick & Co.
McLaughlin, Gormley, King Co.
Murray & Nickell Mfg. Co.
John Powell & Co.
H. H. Rosenthal Co.
Sherwood Petroleum Co.

SOAP DISPENSERS

Bobrick Mfg. Co.
Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Presto Mfg. Co.

SODIUM SILICATE

General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Philadelphia Quartz Co.
Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
Dobbins Mfg. Co.
Fumeral Co.
Getz Exterminators
Hudson Mfg. Co.
Lowell Sprayer Co.

TRI SODIUM PHOSPHATE

General Chemical Co.
Grasselli Chemical Co.
Monsanto Chemical Works
H. H. Rosenthal Co.
Warner Chemical Co.

DISINFECTANTS

COAL TAR DISINFECTANTS—Coefficients 2 to 20 plus F.D.A. Method

•

PINE OIL DISINFECTANTS

•

CRESOL AND CRESYLIC ACID DISINFECTANTS

•

PINE OIL DEODORANTS

•

CRYSTAL AND BLOCK DEODORANTS

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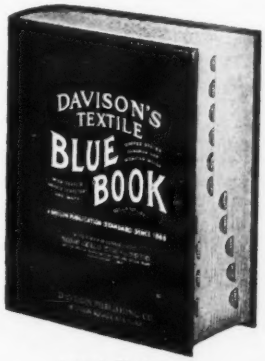

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Los Angeles, Calif.

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